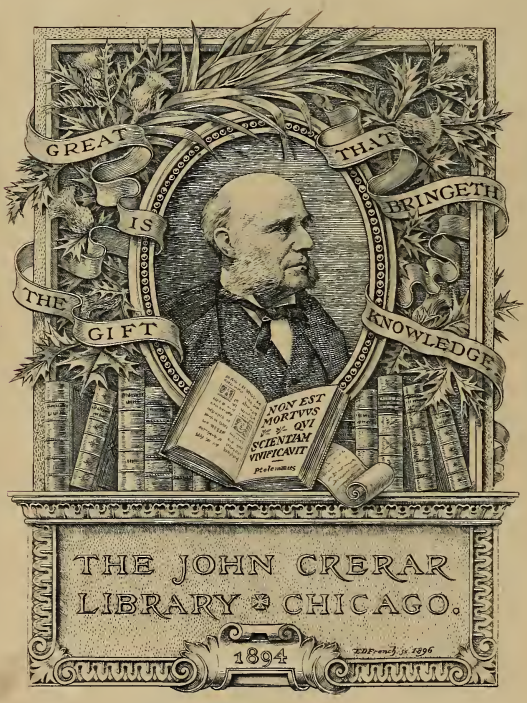
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THE JOHN CRERAR LIBRARY CHICAGO.
1894

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THE MAINE BULLETIN

VOL. XII OCTOBER, 1909 NO. 3

Withdrawn

CATALOG

OF THE

UNIVERSITY OF MAINE

1909-1910

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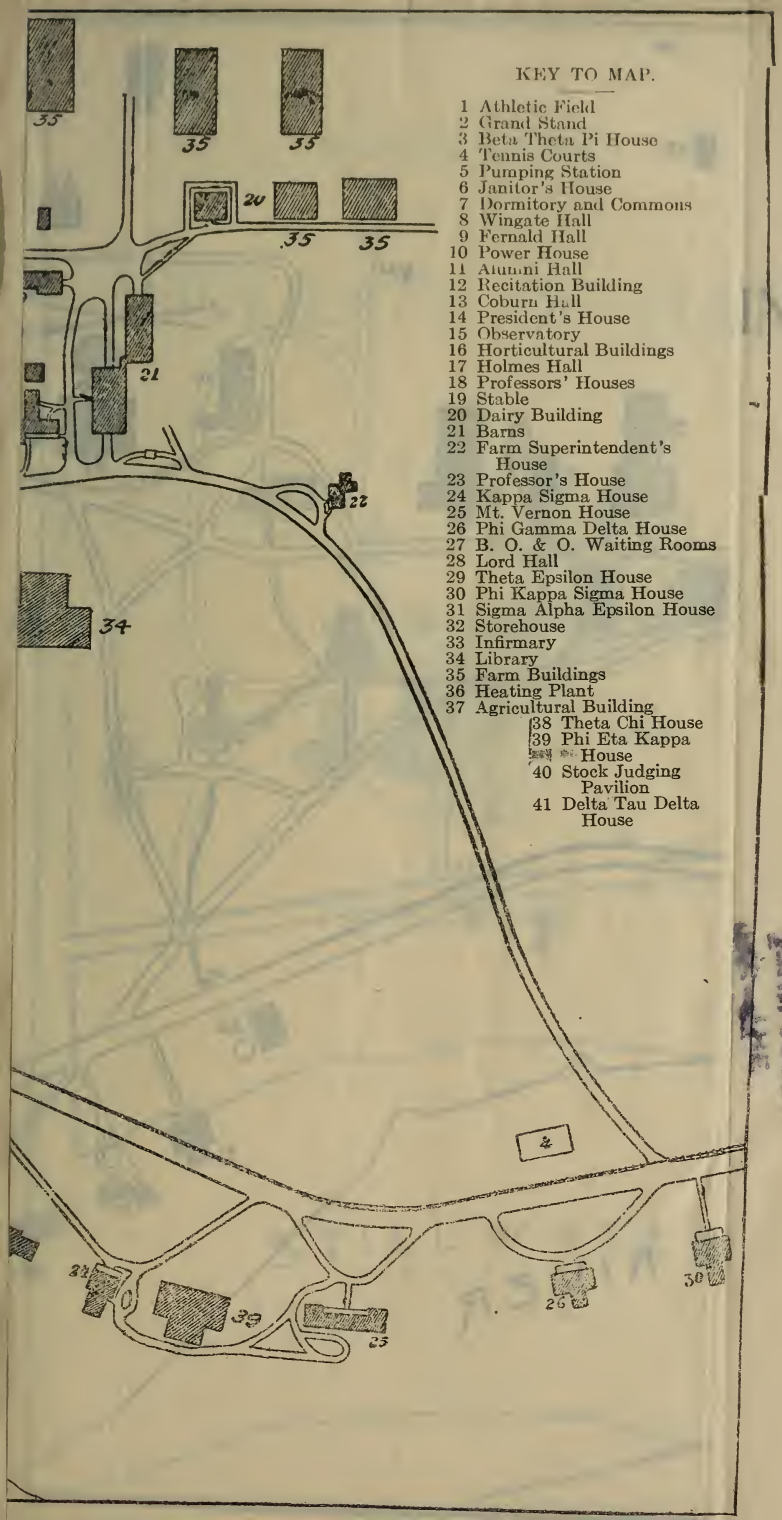
KEY TO MAP.
1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Dormitory and Commons
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Buildings
17 Holmes Hall
18 Professors' Houses
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Agricultural Building
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
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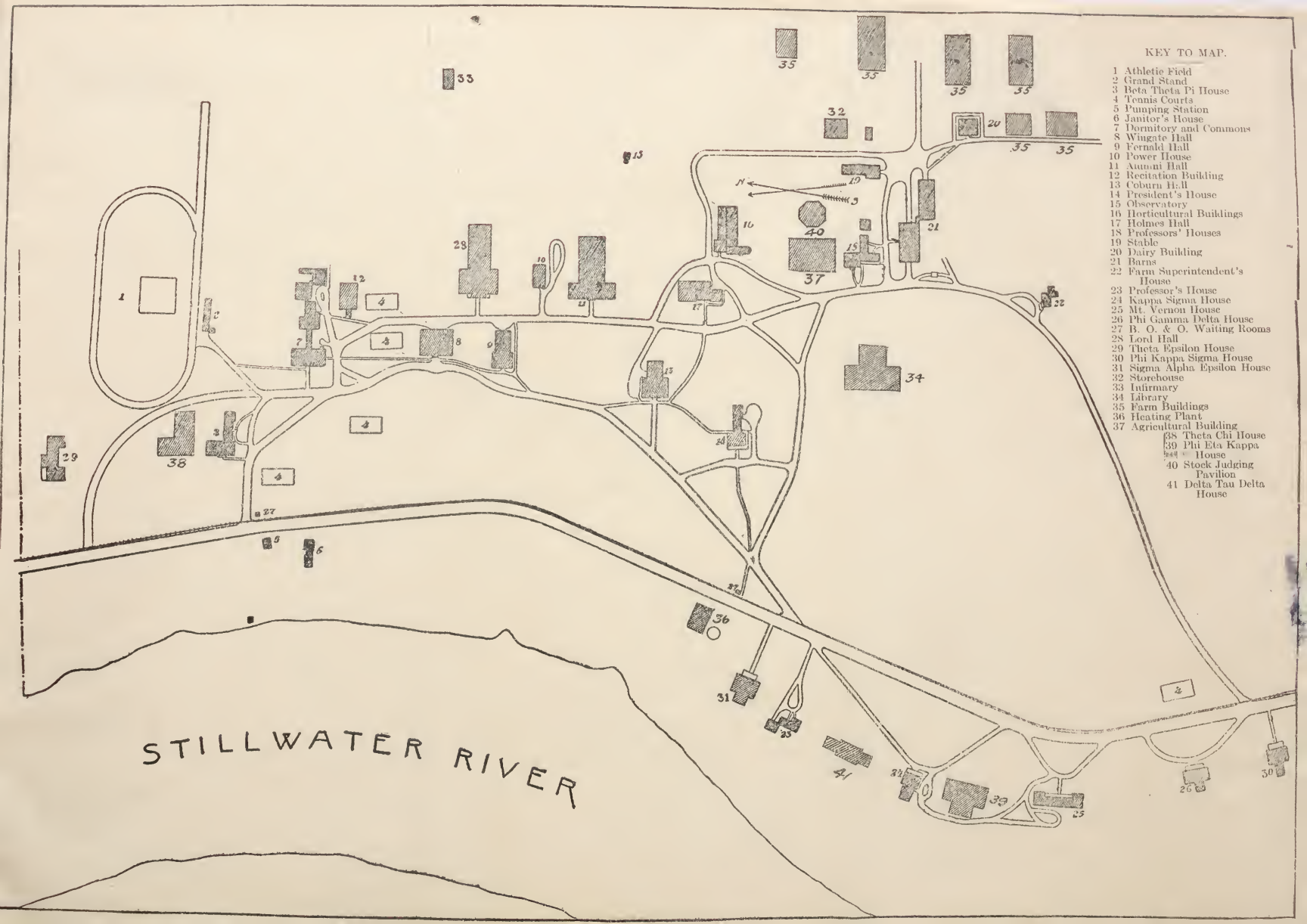
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41 Delta Tau Delta House
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1909-1910

ORONO, MAINE

WATERVILLE
SENTINEL PUBLISHING COMPANY
1909.

1909

JULY

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CALENDAR

FALL SEMESTER, 1909

September 10-14 inclusive,	Arrearage examinations.
September 10-14 inclusive,	Entrance examinations.
September 15, Wednesday,	Registration begins, 1.30 P. M.
September 16, Thursday,	Fall semester begins, 1.30 P. M.
November 23, Tuesday,	Meeting of the Board of Trustees.
November 24, Wednesday,	Thanksgiving recess begins, 5.30 P. M.
November 29, Monday,	Thanksgiving recess ends, 12 M.
December 3, Friday,	Sophomore prize declamations.
December 22, Wednesday,	Christmas recess begins, 5.30 P. M.

1910

January 2, Sunday,	Christmas recess ends, 7.45 A. M.
January 28, Friday,	Fall semester ends.

SPRING SEMESTER, 1910

January 29, Saturday,	Registration.
January 31, Monday,	Spring semester begins.
February 22, Tuesday,	Washington's birthday, a holiday.
March 28, Monday,	Spring recess begins, 7.45 A. M.
April 4, Monday,	Spring recess ends, 7.45 A. M.
April 19, Tuesday,	Patriot's day, a holiday.
May 18, 12 M.-May 22,	Junior week.
May 30, Monday,	Memorial day, a holiday.
June 1-4,	Entrance examinations.
June 1, Wednesday,	8.00 A. M. Algebra. Elementary Algebra (Short Pharmacy). 10.00 A. M. Chemistry. Botany. 1.30 P. M. Latin. 4.30 P. M. Roman History.
June 2, Thursday,	8.00 A. M Arithmetic (Short Pharmacy). Solid Geometry. 10.00 A. M. French. German. Geography (Short Pharmacy). 1.30 P. M. English. English Grammar (Short Pharmacy). 4.30 P. M. English History.

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June	3, Friday,	8.00 A. M. American History and Civil Government.
		American History (Short Pharmacy).
		Trigonometry.
		10.00 A. M. Plane Geometry.
		1.30 P. M. Physics.
June	4, Saturday,	8.00 A. M. Greek.
		Physiology.
		10.00 A. M. Greek History.
		1.30 P. M. Physiography.
June	5, Sunday,	Baccalaureate address.
June	6, Monday,	Convocation.
		Class day.
		Reception by the President.
June	7, Tuesday,	Meeting of the Board of Trustees.
		Receptions by the fraternities.
		Alumni luncheon; alumnae luncheon.
		Address before the Phi Kappa Phi Society.
June	8, Wednesday,	COMMENCEMENT.
		Commencement dinner.
		Meeting of the Alumni Association.
		Commencement concert.
June	27, Monday,	Summer term begins.
August	5, Friday,	Summer term ends.

FALL SEMESTER, 1910

September	16, 17, 19, 20,	Arrearage examinations.
September	16, 17, 19, 20,	Entrance examinations.
September	16 Friday,	8.00 A. M Algebra.
		Elementary Algebra (Short Pharmacy).
		10.00 A. M. Chemistry.
		Botany.
		1.30 P. M Latin.
		4.30 P. M. Roman History.
September	17, Saturday,	8.00 A. M. Arithmetic (Short Pharmacy).
		Solid Geometry.

September 17, Saturday,	10.00 A. M.	French. German. Geography (Short Pharmacy).
	1.30 P. M.	English. English Grammar (Short Pharmacy).
	4.30 P. M.	English History.
September 19, Monday,	8.00 A. M.	American History and Civil Government. American History (Short Pharmacy). Trigonometry.
	10.00 A. M.	Plane Geometry.
	1.30 P. M.	Physics.
September 20, Tuesday,	8.00 A. M.	Greek. Physiology.
	10.00 A. M.	Greek History.
	1.30 P. M.	Physiography.
September 21, Wednesday,	Registration begins, 1.30 P. M.	
September 22, Thursday,	First chapel service, 11 A. M.	
November 22, Tuesday,	Meeting of the Board of Trustees.	
November 23, Wednesday,	Thanksgiving recess begins, 5.30 P. M.	
November 28, Monday,	Thanksgiving recess ends, 12 M.	
December 9, Friday,	Sophomore prize declamations.	
December 22, Thursday,	Christmas recess begins, 5.30 P. M.	

1911

January 2, Monday,	Christmas recess ends, 7.45 A. M.
January 27, Friday,	Fall semester ends.

SPRING SEMESTER, 1911

January 28, Saturday,	Registration.
January 30, Monday,	Spring semester begins.
June 14, Wednesday,	COMMENCEMENT.

CALENDAR OF THE COLLEGE OF LAW

1909.

October 6, Wednesday, Fall term begins.
December 22, Wednesday, Fall term ends.

1910

January 5, Wednesday, Winter term begins.
March 16, Wednesday, Winter term ends.
March 23, Wednesday, Spring term begins.
June 8, Wednesday, COMMENCEMENT.
October 5, Wednesday, Fall term begins.
December 21, Wednesday, Fall term ends.

1911

January 4, Wednesday, Winter term begins.
March 15, Wednesday, Winter term ends.
March 22, Wednesday, Spring term begins.
June 14, Wednesday, COMMENCEMENT.

THE BOARD OF TRUSTEES

Hon. EDWARD BRACKETT WINSLOW, President	Portland
Term expires April 13, 1912	
SAMUEL WADSWORTH GOULD, B. S., Clerk	Skowhegan
Term expires April 16, 1914	
Hon. CHARLES LESTER JONES	Corinna
Term expires April 17, 1910	
Hon. JOHN ALFRED ROBERTS, M. A.	Norway
Term expires May 31, 1911	
Hon. WILLIAM THOMAS HAINES, LL. B., LL. D.	Waterville
Term expires April 24, 1913	
Hon. SUMNER PETER MILLS	Stonington
Term expires September 10, 1914	
EDWIN JAMES HASKELL, B. S.,	Westbrook
Term expires December 31, 1914	
JOHN MARSHALL OAK, B. S.	Bangor
Term expires April 2, 1915	

EXECUTIVE COMMITTEE

Trustees WINSLOW, HASKELL, and OAK

TREASURER

Hon. CHARLES JOHN DUNN	Orono

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Gen. CHARLES HAMLIN, M. A., LL. D., President	Bangor
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Justice ALBERT MOORE SPEAR, B. A.	Gardiner
Hon. WILLIAM THOMAS HAINES, LL. D.	Waterville
Hon. HERBERT MILTON HEATH, M. A.	Augusta
Chief Justice LUCILIUS ALONZO EMERY, LL. D.	Ellsworth
Dean WILLIAM EMANUEL WALZ, M. A., LL. B., Secretary	Bangor

THE EXPERIMENT STATION COUNCIL

PRESIDENT GEORGE EMORY FELLOWS, PH. D., LL. D.	*President*
DIRECTOR CHARLES DAYTON WOODS, Sc. D.	*Secretary*
JOHN ALFRED ROBERTS, M. A., Norway	*Committee of Board of Trustees*
CHARLES LESTER JONES, Corinna	
SAMUEL WADSWORTH GOULD, B. S., Skowhegan	
AUGUSTUS WILLIAM GILMAN, Foxcroft	
	Commissioner of Agriculture
EUGENE HARVEY LIBBY, Auburn	*State Grange*
CHARLES S. POPE, Manchester	*State Pomological Society*
RUTILLUS ALDEN, Winthrop	*State Dairymen's Association*
JAMES MONROE BARTLETT, M. S.	*Members of the Station Staff*
EDITH MARION PATCH, B. S.	
WARNER JACKSON MORSE, M. S.	
RAYMOND PEARL, PH. D.	
HERMAN HERBERT HANSON, M. S.	
FRANK MACY SURFACE, PH. D.	
CHARLES EDWARD LEWIS, PH. D.	
OSKAR AUGUSTUS JOHANNSON, PH. D	
WALTER WERDENFELD BONNS, B. S.	

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OFFICERS

President, Joseph F. Gould, B. S., 1882, Old Town, Maine..... 1910
Recording Secretary, Prof. Fremont L. Russell, B. S., 1885, Orono, Maine 1910
Corresponding Secretary, Ralph K. Jones, B. S., 1886, Orono, Maine 1910
Treasurer, Albert H. Brown, B. S., 1880, Old Town, Maine..... 1910

MEMBERS AT LARGE

Russell W. Eaton, C. E., 1873, Brunswick, Maine..... 1914
Perley B. Palmer, B. C. E., 1896, Orono, Maine..... 1914
John M. Oak, B. S., 1873, Bangor, Maine..... 1913
Louis C. Southard, B. S., 1875, M. S., LL. D., Boston, Mass..... 1913
Albert H. Brown, B. S., 1880, Old Town, Maine..... 1912
George H. Hamlin, C. E., 1873, Orono, Maine..... 1912
Edward H. Kelley, B. S., 1890, Brewer, Maine..... 1911
Paul D. Sargent, B. C. E., 1896, Augusta, Maine..... 1911
Charles S. Bickford, B. S., 1882, Belfast, Maine..... 1910
George E. Thompson, B. C. E., 1891, Orono, Maine..... 1910

Representing the College of Agriculture

Whitman H. Jordan, B. S., 1875, Sc. D., LL. D., Geneva, N. Y... 1910

Representing the College of Arts and Sciences

Will R. Howard, B. S., 1882, Farmington, N. H..... 1912

Representing the College of Law

Freeland Jones, LL. B., 1900, Bangor, Maine..... 1911

Representing the College of Pharmacy

[Vacancy] 1914

Representing the College of Technology

Nathan C. Grover, B. C. E., 1890, S. B., C. E., East Orange, N. J. 1913

ALUMNI ASSOCIATIONS

THE GENERAL ASSOCIATION

President, J. F. Gould, '82, Oldtown
Secretary, F. L. Russell, '85, Orono
Corresponding Secretary, R. K. Jones, '86, Orono
Treasurer, A. H. Brown, '90, Oldtown
Necrologist, J. N. Hart, '85, Orono
Alumni Members of the Athletic Association, P. B. Palmer, '96, Orono, H. B. Buck, '93, Bangor, A. L. Bird, '00, Rockland

The West Maine Association

President, A. C. Wescott, '99, 7 Exchange St., Portland
Secretary and Treasurer, S. E. Patrick, '03, Gorham

The Boston Association

President, E. R. Berry, '04, 107 Cross St., Malden, Mass.
Vice-President, W. L. Sturtevant, '08, Lynn, Mass.
Secretary and Treasurer, S. P. Graves, '03, 30 Court St., Boston, Mass.
Executive Committee, E. E. Palmer, '99, E. O. Goodridge, '85, W. N. Patten, '91

The New York Association

President, Allen Rogers, '97, 764 De Kalb Ave., Brooklyn, N. Y.
Vice-President, M. B. Downing, '99, 55 Franklin St., New York City
Treasurer, A. W. Stephens, '99, 75 Littleton Ave., Newark, N. J.
Secretary, Ralph Hamlin, '98, 399 Sixth Ave., Brooklyn, N. Y.

The Washington (D. C.) Association

President, P. L. Ricker, '00, U. S. Dept. Ag.
Secretary and Treasurer, H. P. Gould, '93, U. S. Dept. Ag.

The Penobscot Valley Association

President, W. B. Pierce, '90, Bangor
Secretary and Treasurer, J. H. McClure, '05, Bangor
Executive Committee, V. K. Gould, '97, H. B. Buck, '93, H. S. Boardman, '95

The Western Association

President, F. M. Davis, '01, 5741 Monroe Ave., Chicago, Ill.
First Vice-President, A. W. Totman, '07, 6008 Jefferson Ave., Chicago, Ill.
Second Vice-President, W. E. Belcher, '99, Box 166, Oak Park, Ill.
Secretary and Treasurer, C. C. Whittier, '99, 1121 The Rookery, Chicago, Ill.
Executive Committee, G. W. Sturtevant, '81, G. W. Barrows, '02, A. J. Butterworth, '06, W. Webber, '84, O. C. Farrington, '81

The Pittsburg Association

President, B. F. Faunce, '01, Pittsburg, Pa.
Vice-President, R. E. Bucknam, '07
Secretary and Treasurer, H. E. Cole, '02, 1023 Park Building, Pittsburg, Pa.
Executive Committee, G. F. Murphy, '00, Chairman, New Kensington, Pa.

The Schenectady Association

President, J. G. Lurvey, '00, 1206 State St.
Vice-President, C. N. Rackliffe, '02, 1206, State St.
Secretary, H. E. Duren, '02, 306 Lafayette St.
Treasurer, H. F. Hoxie, '99, 940 State St.
Executive Committee, C. W. Bartlett, '01, H. P. Mayo, '99, H. E. Duren, '02

The Kennebec Valley Association

President, Harold E. Cook, '00, Waterville
Secretary, Ernest C. Butler, '01, Skowhegan
Treasurer, Samuel J. Foster, '03, Oakland
Executive Committee, J. H. Burleigh, '87, E. C. Butler, '01, H. E. Cook, '00
Legislative Committee, W. R. Pattangall, '97, E. F. Danforth, '92, J. E. Nelson, '04

The College of Law Alumni Association

President, F. D. Fenderson, '99, Limerick
Vice-President, Freeland Jones, '00, Bangor
Corresponding Secretary, G. H. Worster, '05, Bangor
Financial Secretary, N. V. MacLean, '05, Bangor
Treasurer, B. W. Blanchard, '04, Bangor

OFFICERS OF ADMINISTRATION

GEORGE EMORY FELLOWS, President
JAMES NORRIS HART, Dean of the University
JAMES STACY STEVENS, Dean of the College of Arts and Sciences
WILLIAM EMANUEL WALZ, Dean of the College of Law
CHARLES DAYTON WOODS, Director of the Experiment Station
GILMAN ARTHUR DREW, Director of the Museum
ELIZABETH ABBOTT BALENTINE, Secretary of the Faculty

*THE FACULTY OF INSTRUCTION AND INVESTIGATION

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GEORGE EMORY FELLOWS, Ph. D., L. H. D. LL. D. Campus
President

Professor of History

MERRITT CALDWELL FERNALD, Ph. D., LL. D. 54 Main Street
Emeritus Professor of Philosophy

JAMES MONROE BARTLETT, M. S. College Street
Chemist in the Experiment Station

LUCIUS HERBERT MERRILL, Sc. D. 14 Bennoch Street
Professor of Biological and Agricultural Chemistry

JAMES NORRIS HART, C. E., M. S., Sc. D. College Street
Professor of Mathematics and Astronomy
Dean of the University

FREMONT LINCOLN RUSSELL, B. S., V. S. 70 North Main Street
Professor of Bacteriology and Veterinary Science

* Arranged in groups in order of seniority of appointment.

JAMES STACY STEVENS, M. S., LL. D. 99 Main Street
Professor of Physics
Dean of the College of Arts and Sciences

CHARLES DAYTON WOODS, Sc. D. 55 Main Street
Director of the Experiment Station

JOHN HOMER HUDDILSTON, Ph. D. 105 Main Street
Professor of Greek

WILLIAM EMANUEL WALZ, M. A., LL. B. 183 Cedar St., Bangor
Professor of Law
Dean of the College of Law

GILMAN ARTHUR DREW, Ph. D. College Street
Professor of Biology
Director of the Museum

WILBUR FISK JACKMAN, B. S., Ph. C. 38 Pine Street
Professor of Pharmacy

RALPH KNEELAND JONES, B. S. 26 Bennoch Street
Librarian

JACOB BERNARD SEGALL, Ph D., 61 Main Street
Professor of Romance Languages

HAROLD SHERBURNE BOARDMAN, C. E. 75 Main Street
Professor of Civil Engineering

GEORGE DAVIS CHASE, Ph. D. 59 Main Street
Professor of Latin

GORDON EDWIN TOWER, B. S., M. F. Forest Street
Professor of Forestry

CAROLINE COLVIN, Ph. D. Campus
Professor of History

ARTHUR CRAWFORD JEWETT, B. S. 104 Main Street
Professor of Mechanical Engineering

WALTER KIERSTEAD GANONG, B. Sc. 30 Bennoch Street
Professor of Electrical Engineering

CHARLES DAVIDSON, Ph. D. 299 State Street, Bangor
Professor of Education

WARNER JACKSON MORSE, M. S. 76 North Main Street
Plant Pathologist in the Experiment Station

ROBERT JAMES SPRAGUE, Ph. D. 435 Union Street, Bangor
Professor of Economics and Sociology

EDITH MARION PATCH, B. S. College Street
Entomologist in the Experiment Station

CHARLES PARTRIDGE WESTON, C. E., M. A. College Street
Professor of Mechanics and Drawing

RAYMOND PEARL, Ph. D. — Forest Street
Biologist in the Experiment Station

PERCY ANDERSON CAMPBELL, M. S. A. — Campus
Professor of Animal Industry

CHARLES BARTO BROWN, C. E. — 53 Main Street
Professor of Railroad Engineering

WALLACE CRAIG, Ph. D. — 24 Main Street
Professor of Philosophy

ROLAND PALMER GRAY, M. A. — College Street
Professor of English

RALPH HARPER McKEE, Ph. D. — College Street
Professor of Chemistry

GARRETT WILLIAM THOMPSON, Ph. D. — Campus
Professor of German

GUY ANDREW THOMPSON, M. A. — College Street
Professor of English Literature

WINDSOR PRATT DAGGETT, Ph. B. — College Street
Professor of Public Speaking

MYRON TRACY SCUDDER, M. A. — New Brunswick, N. J.
Professor of Education (Summer Term)

EDWARD STONE HAWES, M. A. — Chester, Penn.
Professor of English (Summer Term)

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A. — College Street
Professor of Military Science and Tactics

FRANK MACY SURFACE, Ph. D. — Juniper Street
Associate Biologist in the Experiment Station

MINTIN ASBURY CHRYSLER, Ph. D. — 40 Main Street
Associate Professor of Botany

HERMAN HERBERT HANSON, M. S. — Forest Street
Associate Chemist in the Experiment Station

CHARLES EDWARD LEWIS, Ph. D. — 78 North Main Street
Associate Plant Pathologist in the Experiment Station

CHARLES WILSON EASLEY, Ph. D. — 7 Main Street
Associate Professor of Chemistry

OSKAR AUGUSTUS JOHANNSEN, Ph. D. — Oak Street
Associate Entomologist in the Experiment Station

WALTER WEIDENFELD BONNS, B. S. — Main Street
Associate Horticulturist in the Experiment Station

EDGAR MYRICK SIMPSON, B. A. — 31 Highland Avenue, Bangor
Assistant Professor of Law

ANDREW PAUL RAGGIO, Ph. D. — Oak Street
Assistant Professor of Romance Languages

WALTER MOLBRAY CURTIS, S. B. 51 Main Street
Assistant Professor of Mechanical Engineering

* HARLEY RICHARD WILLARD, M. A. 40 Main Street
Assistant Professor of Mathematics

LEON ELMER WOODMAN, M. A. 20 Mill Street
Assistant Professor of Physics

VICTOR RAY GARDNER, M. S. A. Campus
Assistant Professor of Horticulture
Acting Head of the College of Agriculture

WILLIAM ARCHIBALD BROWN, B. S. A. College Street
Assistant Professor of Animal Industry

ARCHER LEWIS GROVER, B. S. 40 Main Street
Assistant Professor of Drawing

CHARLES PRESTON WEAVER, M. A. 61 Mill Street
Assistant Professor of English

LAURA COMSTOCK University Inn
Assistant Professor of Domestic Science

PAUL LEONARD BEAN, B. S. 28 North Main Street
Assistant Professor of Civil Engineering

CHARLES HOEING, Ph. D. Rochester, N. Y.
Assistant Professor of Latin (Summer Term)

MELVIN ERNEST SHERWIN, M. S. 22 Mill Street
Assistant Professor of Agronomy

GEORGE EDWARD SIMMONS, M. S. Forest Avenue
Assistant Professor of Agronomy
In Charge of Agricultural Extension Work

INSTRUCTORS

GEORGE HENRY WORSTER, LL. M. 234 Center Street, Bangor
Instructor in Sales and Private Corporations

BARTLETT BROOKS, B. A., LL. B. 10 Columbia Building, Bangor
Instructor in Contracts and Negotiable Paper

EVERETT WILLARD DAVEE 50 Mill Street
Instructor in Wood and Iron Work

WALTER EVERETT PRINCE, M. A. 26 Main Street
Instructor in English

CHARLES JENKINS CARTER 6 Pine Street
Instructor in Machine Tool Work

LESLIE INGALLS JOHNSTONE, B. S. Milford
Instructor in Civil Engineering

WILLIS FLYE WASHBURN, B. S. 6 Pine Street
Instructor in Chemistry

* Absent on leave.

LOWELL JACOB REED, B. S. College Street
Instructor in Mathematics

GEORGE EDWARD PEARSON, M. A. 61 Main Street
Instructor in English and Economics

HARRY NEWTON CONSER, M. S., M. A. Oak Street
Instructor in Botany

MAYNE ROSE CURTIS, M. A. College Street
Assistant Biologist in the Experiment Station

JOSEPH FARRINGTON MERRILL, B. S. Campus
Assistant Chemist in the Experiment Station

ALBERT GUY DURGIN, M. S. Middle Street
Assistant Chemist in the Experiment Station

WALTER ELWOOD FARNHAM Mill Street
Instructor in Drawing

ROBERT RUTHERFORD DRUMMOND, B. S. University Inn
Instructor in German

BERTRAND FRENCH BRANN, B. S. 227 Essex Street, Bangor
Instructor in Chemistry

GEORGE ALVIN SCOTT, B. S. in E. E. 80 Main Street
Instructor in Physics

BENJAMIN ENGLE KRAYBILL, PH. B. Campus
Instructor in Industrial Chemistry

JAMES RENFREW DICE, B. S. Campus
Instructor in Animal Industry

WINTHA RUDOLPH PALMER, B. S. Campus
Instructor in Horticulture

SHERMAN DANIEL CHAMBERS, B. S. Oak Street
Instructor in Mathematics

TRUMAN LEIGH HAMLIN, M. A. 12 Bennoch Street
Instructor in Mathematics

WALTER EDMUND WILBUR, B. S. 86 Main Street
Instructor in Mathematics

ERNEST CONANT CHESWELL 57 Main Street
Instructor in Engineering Laboratory Practice

EUGENE LOUIS RAICHE Cambridge, Mass.
Instructor in French (Summer Term)

LAURIE LORENZO BURGESS, PH. D. Cambridge, Mass.
Instructor in Chemistry (Summer Term)

ALFRED BLANCHARD KIRSHAW, A. M. Newton, Mass.
Instructor in English (Summer Term)

ALBERT THEODORE CHILDS, B. S., E. E.
529 Hammond Street, Bangor
Instructor in Electrical Engineering

ALICE MIDDLETON BORING, A. M. — University Inn
Instructor in Zoölogy

TUTORS

WARREN EDWARD CONNOR, B. S. — Campus
Tutor in Civil Engineering

NORMAN HASKELL MAYO, B. S. — Mill Street
Tutor in Civil Engineering

ERNEST CLAUDE DREW, B. S. — 80 Main Street
Tutor in Physics

LECTURERS

FOREST JOHN MARTIN, LL. B. — Kenduskeag Ave., Bangor
Resident Lecturer on Common Law Pleading and Maine Practice

CHARLES HAMLIN, M. A., LL. D. — 25 Fifth Street, Bangor
Lecturer on Bankruptcy and Federal Procedure

LUCILIUS ALONZO EMERY, M. A., LL. D. — Ellsworth
Lecturer on Roman and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D. — Boston
Lecturer on Medico-Legal Relations

EDWARD HOWARD BLAKE, LL. B. — 107 Court Street, Bangor
Lecturer on Admiralty

ASSISTANTS

JAMES ADRIAN GANNETT, B. S. — 12 Bennoch Street
Commercial Secretary

ISABEL MONRO, B. S. — 59 Mill Street
Cataloger in the Library

BERTHA COREY WHITTEMORE — College Street
Assistant in the Library

HARRY MORGAN WOODS, B. A. — 55 Main Street
Assistant to the Director of the Experiment Station

EMPLOYEES

CYRUS SKILLINGS WINCH — 43 Elm Street, Bangor
Taxidermist and Assistant Curator of the Zoölogical Collections

ANDREW MAYHEW SHAW — College Street
Superintendent of Grounds and Greenhouses

CHARLES ANDERSON SMITH — Campus
Foreman of the Farm

HALSEY RICHARDSON WING — Campus
Head Janitor

GEORGE ABRAHAM COLBURN — Bennoch Street
Head Carpenter

GRACE MARY COLBURN — Bennoch Street
Cashier

VIVIAN AUGUSTA PAGE — 21 Pine Street
Stenographer in the College of Agriculture

HELEN CASHMAN, B. S. — 59 Mill Street
Secretary to the President

BLANCHE FOLSOM POOLER — Stillwater
Stenographer in the Experiment Station

ADDIE WEED — Veazie
Stenographer to the Deans and the Secretary

LOTTIE ESTELLE McPHETERS — 7 Main Street
Computer in the Experiment Station

ALICE WOODS AVERILL — 51 Mill Street
Laboratory Assistant in the Experiment Station

NELLIE WILKINS LANE — Campus
Matron of the Mt. Vernon House

HENRY ATLEIGH MILLET — Campus
Meteorological Observer in the Experiment Station

WALTER ANDERSON — Campus
Poultryman in the Experiment Station

ROYDEN LINDSAY HAMMOND — 59 Main Street
Seed Analyst and Photographer in the Experiment Station

HERBERT MORTON TUCKER — Campus
Herdsman

JOHN SUMMERS — Campus
Laboratory Assistant in the Experiment Station

WELLINGTON SINCLAIR — Monmouth
Superintendent of Experiment Station Farm, Monmouth, Maine

*STANDING COMMITTEES OF THE FACULTY

Admission to College

The President, the Deans (sub-committee), Professor Chase, Professor Chrysler, Professor Colvin, Professor Drew, Professor Gardner, Professor Gray, Professor Jewett, Professor McKee, Professor Merrill, Professor Segall, Professor G. W. Thompson, Professor Weston

* The member whose name is printed first is the chairman of the committee.

Advanced Degrees
Professor Chase, Professor Chrysler, Professor Colvin, Professor Gray, Professor Walz, Professor Weston

Approved Tutors
Professor Hart, Secretary Balentine

Athletics
Professor Jones, Professor Boardman

Attendance
Professor Hart, Professor C. B. Brown, Professor Stevens

Bachelor's Degree
Professor Stevens, Professor Colvin, Professor Weston

Bulletins
Professor Jones

Catalog
Professor Stevens

Courses
Professor Hart, Professor Boardman, Professor Drew, Professor Stevens

Debate
Professor Sprague, Professor Colvin, Professor Daggett

Delinquent Students
Professor Boardman, Professor Daggett, Professor Ganong Professor Grover, Mr. Reed

Entrance Examinations
Professor Stevens

Fitting Schools
Professor Chase, Professor Chrysler, Professor Davidson, Professor Gray, Professor Hart (Secretary), Professor Huddilston, Professor McKee, Professor Stevens, Professor G. A. Thompson, Professor G. W. Thompson

Health
Professor Russell, Professor Colvin, Professor Comstock, Professor Jackman

Honors
Professor Stevens, Professor Huddilston, Professor G. A. Thompson

Library
Professor Jones, Professor Colvin, Professor Ganong, Professor Jackman

Publicity
Professor Chase, Professor Gray

Registration
Professor Stevens, Professor Drew, Professor Hart

Rules
Professor Hart, Professor Jewett, Professor Stevens, Director Woods

Student Advisers
For freshmen in all courses: Professor Hart
For all other students: the heads of the departments in which their major subjects are taken

Student Organizations Other Than Athletics
Professor Jones, Professor Daggett, Professor G. W. Thompson

Summer Term
Professor Stevens

Tuition Loans
President Fellows, Professor C. B. Brown, Professor Hart

The University Council
Faculty Members: President Fellows, Professor Boardman, Professor Hart, Professor Stevens

THE UNIVERSITY OF MAINE

HISTORY

The University of Maine is an integral part of the public educational system of the state. It completes the work done in the high school, as the work in the high school completes that of the primary and grammar schools.

Through appropriations by the state and the United States it furnishes instruction in the Liberal Arts and Sciences, Agriculture, Engineering, Forestry, Pharmacy, and Law.

By an Act of Congress, approved July 2, 1862 by President Lincoln, it was provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out the purposes of the act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that, in addition to the studies especially required by the Act of Congress, the college should teach such other studies as its facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public land, from which the University has realized an endowment fund of $118,300. This has been increased by a bequest of $100,000 from Abner Coburn of Skowhegan, who was for many years President of the Board of Trustees. The state pays to the University five per cent. on the fund realized from the public lands, and four per cent. on the Coburn Bequest. The town of Orono contributed $8,000, and the town of Oldtown $3,000, for the purchase of the site on which the buildings stand. The state has appropriated about $450,000 for the material equipment. The present value of the buildings and equipment belonging to the University, including gifts other than those made by the state, is estimated at $750,000.

Under an Act of Congress, approved March 2, 1887, the University receives $15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress, approved August 30, 1890, the University receives $25,000 annually for its more complete endowment and maintenance.

Under an Act of Congress, approved March 17, 1906, the University received for the year 1906 $5,000, which is to be increased each year by $2,000, until it reaches $15,000 a year for the maintenance of the Agricultural Experiment Station.

By an amendment to the Agricultural Appropriation Bill, approved March 4, 1907, the University received $5,000 in the year 1907, and receives an addition of a like amount each year until the sum reaches $25,000.

Under an Act of the Legislature, approved April 2, 1909, the University receives $100,000 a year for each of the years 1909, 1910, 1911, and 1912, for buildings and maintenance. Student fees and miscellaneous receipts complete the income.

LOCATION

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, an arm of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the state.

The cars of the Bangor Railway and Electric railroad run through the University grounds. Visitors may find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located in the Exchange Building, Bangor, at the corner of Exchange and State streets.

THE BUILDINGS AND THEIR EQUIPMENT

Oak Hall.—In the northern part of the campus is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak, of Garland, for many years a useful member of the board of trustees. It contains forty-nine rooms for students, and is furnished with bath rooms. It is heated by steam, supplied with water, and lighted by electricity.

Fernald Hall.—This building, named in honor of Merritt C. Fernald, LL. D., President of the University from 1879 to 1893, is a two-story brick building. It contains fifteen rooms devoted to the departments of chemistry and pharmacy. On the first floor are the quantitative and pharmaceutical laboratories, with offices and private laboratories for the professors of chemistry and pharmacy; upon the second floor are lecture rooms, the qualitative laboratory, the office and private laboratory of the instructor in qualitative analysis, a store room, and a recitation room. Under the roof are arranged the mineralogical laboratory, dark rooms, and a laboratory for freshman work. In the basement are an assay laboratory, a laboratory for water analysis, a room for organic preparations, and store rooms.

Coburn Hall.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn, of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. In the basement are located a laboratory for animal and plant physiology, the taxidermist's laboratory, and the University Exchange. Connected with

the basement is a small greenhouse for the use of the biological department. On the first floor are three recitation rooms, a research zoölogical laboratory, and part of the museum. On the second floor are the botanical and zoölogical laboratories and lecture room and part of the museum. On the third floor are recitation rooms for the departments of economics, philosophy, and German, the psychological laboratory, and the remainder of the museum.

Wingate Hall.—One of the most conspicuous buildings on the campus, Wingate Hall, named in honor of William P. Wingate, of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied chiefly by the departments of civil engineering, physics, and mechanics and drawing. On the ground floor are four recitation rooms, instrument rooms, an optical room, and the offices of the professors of civil engineering and mechanics and drawing. On the second floor are the offices and recitation rooms of the professors of physics, Greek, and Latin, two physical laboratories, and the physical apparatus rooms. On the third floor are two large, well lighted drawing rooms for the use of the departments of civil engineering and mechanics and drawing, and a filing room containing a collection of blue prints belonging to the department of civil engineering. In the basement are the electrical laboratory and the photometer room of the department of physics, and the cement testing laboratory. On the fourth floor is another photometer room for the use of students in physics.

Alumni Hall.—To the northeast of Coburn Hall stands Alumni Hall, erected in 1900. The front part contains on the ground floor the offices of the President, Secretary, and Cashier, a Board room, two recitation rooms for the use of the mathematical department, and the office of the Dean of the University; the second floor contains the university chapel with a large pipe organ in the choir gallery, and the drill hall and gymnasium with a running track in the gallery. Under the drill hall are the offices of the military instructor and the physical director, the baseball cage, lockers, lavatories, rooms for storage, etc. The dimensions of the drill hall and gymnasium are 100 x 62 feet. This room is encircled by a 9-foot running track suspended from the roof. As a gymnasium it is equipped with complete apparatus of the most approved kind.

The Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction,

with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a Repsold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

Lord Hall.—This building, named in honor of Honorable Henry Lord, Ex-President of the Board of Trustees, is designed for the departments of mechanical and electrical engineering. It consists of a main part, 82 x 56 feet in area and two stories in height, and an ell, 125 x 42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc. For tests of materials there are two Riehle power operated testing machines, one of 60,000 lbs. capacity, for tensile, and compressive tests, and one of 150,000 lbs. capacity for tensile, compressive, and transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necessary for the study of engine performance.

The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. These are all well equipped. The forge shop had complete new apparatus installed a few years ago. The forges are of the Sturtevant down draft type. New benches and new lathes have just been installed in the pattern shop, and also new lathes of the highest type in the machine shop.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volt alternating current system to direct current by means of rotary converters and belted alternating current motors driving direct current generators. In addition to volt-meters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7½ kilowatt special auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Holmes Hall.—This is a two-story brick building, 81 x 48 feet, standing south of Alumni Hall. It is occupied by the Maine Agricultural Experiment Station and is arranged as follows:

On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, drugs, and fertilizers; the laboratory for vegetable pathology; and the biological laboratories. The general office and mailing room, the director's office, the laboratory for seed testing and photography, the entomological laboratories, and the library are on the second floor.

In the basement are rooms for the boiler, for the gas machine, for the grinding and preparation of samples, for the calorimeter; culture and preparation rooms used by the vegetable pathologist, and rooms for the storage of fuel, chemicals, and glass ware. The large attic is used for the storage of samples and supplies. With the exception of the thermometers and rain gauge, the meteorological apparatus is in this building. The building is connected with the steam heating plant, supplied with gas and electricity, and is thoroughly equipped with apparatus for the work of agricultural investigation.

An attached greenhouse is used by the entomologist and vegetable pathologist.

Library.—The library, completed in 1906, is the most attractive building on the campus. For its erection and furnishing the sum of $55,000 was given, without conditions, by Mr. Andrew Carnegie.

The building is two stories above a basement which is almost entirely above the ground level. The stacks are in the rear of the main building, and have a capacity of 75,000 volumes, with a cataloging room on the first floor, opening from the librarian's office. The first floor of the main building contains an entrance hall, open to the dome; on one side is a periodical room, in the rear of which is a room for reserved books, and on the other side is a reference room which leads to the librarian's office; there is also a women's room on this floor. The second floor has a gallery surrounding a central open space, and on its walls, and in the entrance hall below, are the art collections; on the second floor also are a lecture hall, with a seating capacity of one hundred and twenty-five, and five seminar rooms. The basement contains a newspaper room, a club room in which meetings of the various student organizations are held, a janitor's room, a store room, and a men's room.

The library is well lighted and thoroughly ventilated. Each floor of the stacks and each seminar room is connected by an intercommunicating telephone system with the librarian's office, the assistant's desk, and the janitor's room; and the librarian's office has telephone connection with the University branch exchange.

The Power House.—This wooden building, 30 x 56 feet, just north of Alumni Hall, contains two boilers, of one hundred and fifty, and one hundred horse power, respectively, a fifty horse power Corliss engine, a fifteen horse power Otto gasoline engine, and the dynamos, which comprise the lighting plant. Students in the electrical engineering course receive instruction in the care and running of this equipment.

The Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. It is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

The Dairy Building.—The Dairy Building, 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is supplied with hot and cold water. Power is furnished by a six horse-power engine.

Central Heating Plant.—The new central heating station is located across the car tracks from the University buildings, just above the Sigma Alpha Epsilon house, and on low ground so that practically all the buildings to be connected will drain by gravity to the plant, thus saving pumping or lifting of the returns.

The station is a plain red brick structure, without any attempt at ornamentation, but of good proportions, and large enough to provide room for present needs and allow for considerable future extensions.

The pump pit is 8 x 17½ feet, the engine room 17½ x 40 feet, the boiler room 40 x 42 feet, and the proposed coal pocket 32 x 42 feet.

The chimney is 100 feet high, and 60 inches in diameter. It is of radial brick construction and stands on a solid ledge. The station equipment consists of three 72-inch boilers, 17 feet 6 inches long, with 16 foot tubes. They are of butt joint construction, with double cover strips, and capable of running 150 lbs. pressure if necessary. In connection with the boiler plant there are two 6 x 4 x ½ feet boiler feed pumps, with receiving tank, for handling the return water of condensation as it comes back from the buildings, and putting it into the boilers. All necessary provisions have been made for the future installation of engines and generators to furnish light and power for the University when practicable. This plant supplies heat to nearly all the University buildings.

The Agricultural Building.—The Agricultural Building is the largest building on the campus. The ground plan covers 63 x 100 feet and the

building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors including a well lighted basement for lecture rooms and laboratories.

On the first floor are the offices of the Dean of the College of Agriculture, the faculty room and library, the offices and class rooms of the professors of agricultural chemistry, animal industry, and poultry husbandry, and the office and filing room of the extension department.

On the second floor are the offices of the departments of agronomy, forestry, and domestic science, the agronomy and forestry lecture rooms, farm crops laboratory with seed and plant storage rooms, bacteriological laboratory, and the kitchen and dining room of the department of domestic science.

Across the front of the building on the third floor are the office, class room, refrigerator, and laboratories of the department of horticulture.

The remaining half of this floor is occupied by a large lecture room and two draughting rooms separated from the larger room by folding doors, so that the three rooms can be thrown into a large auditorium at any time.

The basement is built high above the grade line so that light and ventilation are good. It contains the office, lecture room, and operating room of the department of veterinary science, timber testing laboratory, a dry kiln, and a wood storage room for forestry, the agricultural chemistry laboratory, soil physics laboratory, a spraying laboratory, a laundry for the department of domestic science, dark rooms for photography, and lavatories.

The interior finish and furniture are in dark mission stain, and the building is equipped with electric lights, elevator, hot and cold water, gas, and high pressure steam for laboratory work.

The Stock Judging Pavilion.—Located about fifty feet to the rear of the Agricultural Building is an octagonal structure fifty feet in diameter. It is built of the same materials as the larger building and is used for scoring and judging stock. In the center of the structure is a ring twenty-five feet in diameter, and surrounding this ring are six rows of seats arranged in amphitheatre style. The building has a seating capacity of about six hundred and can be used for meetings too large for any of the rooms in the Agricultural Building.

The Poultry Plant.—The poultry plant of the College of Agriculture consists of an incubator cellar, 25 x 40 feet in size, built of brick with non-conducting walls. On top of this cellar has been erected a one and a half story frame structure in which are located a poultry apparatus laboratory, in which machinery of various kinds is operated, and storage

rooms for feed, incubators, brooders, and other equipment. Attached to the incubator cellar is a brooder house, 15 x 40 feet, for winter instruction. It is equipped with a hot water heater. The fattening and killing house is 14 x 45 feet in size with interior arrangement to demonstrate crate and pen fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room and is equipped with water heater, cooling tanks, etc. The several breeds of fowls kept by the College of Agriculture for purposes of instruction are housed in colony houses of various styles and sizes, and one long laying house built on the most approved plans.

The poultry plant belonging to the Experiment Station contains an incubator house, 31 x 31 feet, with tenement above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2,500 chicks.

The Farm Buildings.—The lower barn, 100 x 50 feet, contains a modern tie-up with 26 stalls, two grain rooms, two bull rooms, nursery, calf room, and silo, and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, an electric motor for power, and a mill for grinding. The barns are lighted by electricity and supplied with water and steam. The basements of the barns contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, is of special design and contains six large pens, a nursery, and a storage room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery.

A modern up-to-date piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed cooking rooms.

A ten room farm cottage, occupied by the men employed in the different departments comprising the College of Agriculture has also been erected.

The Mt. Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings, upon a site overlooking the campus and commands a beautiful view of the river, villages, and hills. It is two stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor, dining-room, kitchen, bath-room, and ten study rooms, intended for two students each. The rooms are large, well lighted, heated by steam, and provided

with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. Mt. Vernon House is under the supervision of a matron.

The Fraternity Houses.—Eleven of the student fraternities occupy club houses. Nine of the houses are on the campus, and two in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. The fraternities maintain their own boarding establishments.

The Infirmary.—A small wooden building has been erected on the bank campus, to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for women, as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, the Commons, or general boarding house, and six residences occupied by members of the faculty.

The Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Aumni Association, is located at the northern end of the campus, about 1,200 feet from the Gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and field athletics.

THE LIBRARY

The library contains over forty thousand bound volumes and over ten thousand pamphlets, and includes the library of the Experiment Station, which contains about two thousand five hundred volumes, and that of the College of Law, which contains about three thousand volumes. Reference libraries are maintained in departmental rooms by those departments which require them.

More than half the volumes in the library have been added within the last ten years. Accessions average about 2,500 annually, and the greater part of these are acquired by purchase. In large part purchases are made of books selected by heads of departments, and this method results in a collection of great working value.

The library is classified according to the Dewey system, slightly modified; there is a card catalog arranged by authors and subjects; access to the shelves is entirely unrestricted. Students may borrow three

volumes at a time, to be retained three weeks, when they may be renewed, unless previously called for; special permission to borrow a larger number may be obtained, when necessary, upon application to the librarian. There is a fine of two cents a day for books kept over time. Officers and alumni of the University may borrow any reasonable number of volumes without time limit, except that all books must be returned at least nine days before Commencement, and the return of any volume may be required at any time by the library committee. Other responsible persons may obtain the privileges of the library upon application to the Librarian. The Librarian and his assistants are glad to give advice and help at any time.

THE MUSEUM OF NATURAL HISTORY

GILMAN ARTHUR DREW, Director
Curator of the Zoölogical Collections
LUCIUS HERBERT MERRILL
Curator of the Geological Collections
MINTIN ASBURY CHRYSLER
Curator of the Botanical Collections
CYRUS SKILLINGS WINCH
Taxidermist and Assistant Curator of the Zoölogical Collections

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building.

The taxidermist devotes his entire time to the museum, and contributors may be assured that their donations will be properly cared for. Valuable specimens that could be saved for the museum with little expense of time or money are frequently allowed to go to waste. While the museum is not in a position to pay for specimens it will gladly arrange for their transportation, and the name of the donor will be placed on the specimen label. The locality and date of collection should accompany each specimen, as well as the name of the donor and such other information as might prove valuable.

Geological Collections.—These collections occupying the upper floor of the wing of Coburn Hall are accessible daily during the college year except on Saturday and Sunday. Six new cases for the exhibition of specimens and storage of duplicate material have been placed in this room, and the museum has been entirely reärranged. They include the more important fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the state; a general collection of the more common minerals; a collection of economic minerals furnished by the U. S. National Museum; an educational series of rocks furnished by the U. S. Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the state may be made of great value, both from the scientific and economic standpoint. Students and others residing in the state are urged to contribute specimens from their home localities. Acknowledgment is here made of valuable accessions from Mr. F. R. Patten and Dr. O. W. Knight.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formaline material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the State, a small set of exotic mammals, a more complete working collection of native birds, birds' nests, and eggs, an illustrative collection of the other groups of vertebrates, a rather large collection of the shells of native and exotic molluscs and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

During the year the taxidermist, beside preparing many birds and small mammals for exhibition, has completed the exhibition case of deer, which consists of an adult and spike-horned buck and an adult and young doe, with groundwork to represent the natural surroundings of these animals. The group occupies a large case near the entrance of the room that contains the collections.

Through the courtesy of the Fish and Game Commissioner and other friends of the museum most of the material that is needed for an exhibition case of moose has been procured. A young bull, as nearly a spike-horn as possible, is still needed.

Mr. Carl Preble of Bangor has generously donated four young foxes which will form part of a group of foxes when satisfactory adult specimens are obtained.

Mr. Granville M. Gray of Brewer has donated his valuable collection plete sets.

Others to whom the museum is indebted for valuable donations this year are Messrs. A. H. Sampson, H. R. Wing, E. H. Dakin, E. R. Gross, Harry White, Oscar Fickett, H. A. Parker, A. E. Elliott, B. McGarry, Claude Noyes, and Frank Lane. Many members of the faculty, students, and other friends of the University have contributed one or more specimens each, and the taxidermist has collected many of the nests and eggs of Maine birds. This includes fifty-eight comspecimens.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall. The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents more especially the flora of Maine and other New England States, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The

late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticæ, Cummings and Seymour's North American Lichens, and a collection of economic seeds prepared by the U. S. Department of Agriculture.

The herbarium specimens illustrating the trees of the State have been largely replaced by new material during the past year, and a number of bottled specimens of conifers have been prepared, partly from material obtained at the Arnold Arboretum of Harvard University. A beginning has been made in the display of large blocks illustrating the general features of structure of the timber trees of the state. Additional space is needed for the display of this valuable collection. A large number of specimens of artificial silk have been furnished by Mr. G. O. Hamlin, '00. Prof. L. H. Merrill and Mr. B. T. Harvey have contributed valuable specimens.

THE ART COLLECTION

The establishment of the Classical department in the University of Maine, in 1899, marked the beginning of an awakened interest in the College of Arts and Science. Parallel with the introduction of these studies has been the interest in an art collection which serves to vitalize and intensify the work in the humanities.

The collection which has gone forward with rapid growth consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University is fortunate in possessing many of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia*

and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library contains examples of the work of the chief Florentine and Umbrian masters of the 14th and 15th centuries, arranged on the walls in historical sequence. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the Classical departments have a large collection of photographs and lantern slides. A stereopticon lantern is a part of the regular equipment in Classics and Art.

ORGANIZATIONS

The following is a list of organizations existing in the University: The Deutscher Verein, the Cercle Français, the Debating Society, the Electrical and Mechanical Society, Alpha Zeta, (honorary), the Agricultural Club, the Civil Engineering Society, the Chemical Society, the Literati the Dramatic Club, the Phi Kappa Phi (honorary), the Young Men's Christian Association, the Young Women's Christian Association, the Round Table, the Arts Club, the Athletic Association, the Glee Club, the Instrumental Club, the Band.

Junior Electrical and Mechanical Society.—The Junior Electrical and Mechanical Society aims to unite the interests of the electrical and mechanical students and to keep its members in touch with the practical side of engineering. The society meets each week when topics of practical interest are explained and discussed. All juniors in electrical or mechanical engineering are eligible to membership, and seniors are honorary members.

Junior Civil Society.—This society is composed of the members of the junior class who take the course in civil engineering. The object of the society is to investigate by reading and discussion the various engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of other institutions and by other practicing engineers.

The affairs of the society are controlled by the students under the advice of the head of the department of civil engineering.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing, or to those who have shown marked ability along the lines of agricultural study and research.

The Agricultural Club.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

The Dramatic Club.—The Dramatic Club aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all undergraduates are eligible.

The Literati.—This is an organization in the College of Arts and Sciences for the promotion of the literary, dramatic, and musical interests of the University.

Deutscher Verein.—This society, organized 1902, is composed of students and teachers. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

Cercle Français.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the fall semester of the senior year the five members of the class having the highest standing are elected members, and at the end of the year the five next highest in the collegiate department, and two from the College of Law, are added.

The Young Men's Christian Association.—The Young Men's Christian Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Library, and classes for the study of the Bible are conducted on Sunday. This association is a branch of the national Young Men's Christian Association.

The Young Women's Christian Association.—This is an organization for religious work composed of women students.

Round Table.—The Round Table is an organization of the wives of the professors in the University. Its purpose is to promote the social welfare of the students. For the past three years a monthly reception

has been given to the students in the Club Room of the Library, by the ladies of the Round Table. These receptions are to continue as a regular feature of the social life of the University.

The Arts Club.—This is a club composed of the Professors in the College of Arts and Sciences with their wives. It meets once a month and discusses subjects bearing on the various lines of work in that college.

UNIVERSITY PUBLICATIONS

The Annual Catalog of the University of Maine.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

The Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the trustees and president includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalog of graduates.

The University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

The Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public. Among those of special interest to the public are bulletins relating to the Classical Course, the Courses in Agriculture, the Courses in Pharmacy, the College of Law, the College of Arts and Sciences, the Courses in Engineering, the Courses in Forestry, the Summer Term, and Student Expenses.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the state by the Department of Agricultural Extension.

The Annual Report of the Experiment Station, and the Experiment Station Bulletins.—These give complete results of the work of the station.

The Maine Campus.—This is a journal published weekly during the academic year by an association of the students.

The Prism.—The Prism is an illustrated annual, published by the junior class.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammu-

nition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of four companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the new olive-drab service uniforms prescribed for infantry officers of the United States Army, except that "Maine" insignia and buttons are used; for non-commissioned officers, the new olive-drab service uniforms of the United States Army, except that "Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14.15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty, and may wear it at other times.

The three seniors who attain the highest standing in the military department are reported to the military secretary of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

All men students physically qualified are required to take military work for three hours a week during their first and second years at the University, except that those admitted to advanced standing may elect other work equal to one credit. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. Graduation requirements include one year's military work, or a substitute under the above conditions. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years' course. After the freshman and sophomore years, the work is elective. Students in the College of Law, the School Course in Agriculture, and the Short Course in Phaarmacy, are excused from military work.

The grades and relative rank of officers and non-commissioned officers will be determined by the Professor in charge, subject to the approval of the President.

PHYSICAL TRAINING

Physical training is required of sophomores two hours per week. Credit is given on the basis of three hours of physical training to one

hour of recitation. All other students may elect this work and receive credit. Students registered on athletic teams are excused from this prescribed physical training during the time they are engaged in the regular athletic training, but no credit will be given for the athletic training unless the physical training is taken for the remainder of the year. Sophomores electing military work will be excused from work in physical training. Every student registering for an athletic team must pass the required physical examination.

All students have the opportunity of taking a systematic course in physical training. The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220 yard straightaway and is graded and laid out for football, baseball, and track athletics. Here the men may exercise for recreation or train for active competition. There are several tennis courts on the University campus. On the Stillwater river canoeing may be enjoyed, as well as skating and ice hockey in the winter.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the physical director, the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. There is a floor space of 6,262 square feet and an overhead running track. This is supplied with an equipment of modern apparatus for heavy and light gymnastic work.

All male students exercising at class hours wear the regulation suit which consists of white shirt, white running pants with blue stripe, and white rubber sole shoes.

It is the aim of the department of physical training to encourage participation in all forms of wholesome out-door exercise and to arouse a general interest in athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for an athletic team, the department of physical training maintaining a reasonable supervision to insure regularly.

PUBLIC WORSHIP

Short religious services are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association and the Young Women's Christian Association are held twice each week. Vesper services are held during the year in the University chapel Sundays at 4 P. M. At these services repre-

sentatives of the various religious denominations of the state are present and address the students.

GENERAL REGULATIONS

The University has no rules for the guidance of students, with the exception of the following:

RULE OF CONDUCT

A student is expected to show both within and without the University such respect for order, morality and the rights of others, and such sense of personal honor as are demanded of good citizens and gentlemen.

The regulations in regard to the selection of studies, standing and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, and athletics, are printed in a pamphlet, which may be obtained from the Secretary.

By these regulations, the quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of twenty-two hours of class-room work each week. In the application of this rule, two or three hours of laboratory work, or of other exercises not requiring preparation, count as one hour. No excuses for absence are asked for or required. Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise. Any student absent in one semester, seven times from a class-room subject occurring five times a week, or six times from a subject occurring four times a week, or four times from a three-hour subject, or twice from a two-hour subject, or once from a one-hour subject, shall be notified. In case a subject continues only part of a semester the number of absences is proportionately reduced. If after such notice he shall have two additional absences he shall be dropped from that class. A student who has been dropped from a class on account of absences may apply to the Committee on Attendance for reinstatement. If the committee find his explanations satisfactory, and if the instructor reports that he can continue the course with profit, he may be reinstated. If after reinstatement his record be unsatisfactory either to the instructor or to the committee, he shall be permanently dropped from that class. (This rule does not apply to time work.)

Written examinations are held immediately before the beginning of the fall semester for all studies in arrears. A student absent from the University by permission of the Faculty, at the time of these arrearage examinations, may have a special examination at such time as may be

arranged with the instructor under whom the arrearage occurred. For such a special examination a fee of two dollars shall be paid to the University. A student who fails to make up an arrearage in a required subject before the study is again given in class is required to attend recitations in that study, or make up the work under a tutor selected by the Faculty.

Each student is given a report of his work shortly after the close of each semester. Parents or guardians may obtain these reports upon application to the Secretary. The passing rank in all subjects is seventy per cent.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average standing, after the freshman year, of ninety on a scale of one hundred. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average standing of eighty per cent. in all previous work, and an average standing of ninety per cent. in all previous work of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester. Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the Faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory or drawing-room work may be tested by examination, or thesis, or both, at the discretion of the committee. The note-books kept in such work shall be submitted to the committee and may take the place of a thesis in case they show practically the whole work of the course. The Faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their

nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees

The degree of Bachelor of Arts (B. A.) is conferred upon all students in the College of Arts and Sciences. These students are required to fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science (B. S.) is conferred upon students who complete the Chemical, Agricultural, Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Forestry, Pharmacy, or Domestic Science courses.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the Short Pharmacy Course.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the Law Course.

A member of the Senior class who at the end of the spring recess is deficient in any subject in which no regular examination is to be held during the remainder of the year, may have one examination, not later than the last Friday of the year, at such time and in such manner as the instructor having charge of that study may determine. Except under extraordinary circumstances, no special examination will be allowed to a senior who fails in, or is excluded from, a final examination at the end of the spring semester.

Theses required from candidates for the degree of B. S. must be completed to the satisfaction of the major instructor and deposited in the library, accompanied by the binding fee, not later than twelve o'clock (noon), nine days preceding Commencement. They shall be printed or typewritten, unless the subject matter prevents, on paper of good quality, 8 x 10½ inches, with not less than one inch margin on the inner edge and half-inch margin on the outer. They shall be bound in black leather with title on first cover. Drawings accompanying a thesis may be folded and bound with the thesis, or placed in a pocket on the third page of the cover; or, if too many for this, they may be bound separately, in size to suit the drawings.

Candidates for degrees who fail to meet these requirements will not be awarded their degrees, and their names will not appear on the Commencement program. A minimum residence of one year is required for the attainment of any bachelor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each college year, not later than Oct. 1. Those entering the University after that date must obtain the consent of the committee of advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts or Master of Science must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and master's degrees.

No work done before the conferring of the bachelor's degree shall be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study for each candidate must be approved by the committee on advanced degrees not later than the first week in October. A registration fee of $5 is charged, and an additional fee of $15 for examinations and diploma is payable upon the completion of the work. One registration fee is required for graduate students.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the fifteen hours required in the spring semester. Theses must be submitted not later than May 20th. The same regulations regarding the size and style of binding, outlined under the Bachelor's degree, apply here.

For the conditions for the degree of Master of Laws see the statements under the College of Law.

The professional degrees of Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), may be conferred upon graduates of the Civil Engineering, Mechanical Engineering, and Electrical Engineering courses, respectively, upon the presentation of a satis-

factory thesis after at least three years of professional work subsequent to graduation. A fee of $10.00 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

An estimate of the necessary annual expenses of a student in any department, except the College of Law, is made in the following table. For the expenses of students in the College of Law, see the article on that College. It should be noticed that clothing, traveling, vacation, society, and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in Oak Hall and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses.

ANNUAL EXPENSES FOR STUDENTS FROM MAINE

Tuition, registration fee, and incidentals for the year	$60 00
Laboratory fees, (average) about	10 00
Text-books, about	15 00
Board, 36 weeks at $3.00 or $3.50	$108.00 or 126 00
Heat and light for half room, and general care of dormitory	30 60
Total	$223.60 or $241 60

The tuition charge is $30.00 a semester, or $60.00 a year for students from Maine. For students from outside the state the tuition is $35.00 a semester, or $70.00 a year. Tuition includes what has heretofore been subdivided into tuition, incidentals, and registration fees.

By act of the Legislature, $30.00 per year is deducted from the above charge for students in the courses in Agriculture, this being the amount of tuition charged at the time of the ACT.

By action of the Legislature of 1909, the charge to engineering students from outside the state of Maine, for the next four years, is to be $100 per year instead of $70. The charge for students from outside the state of Maine in all other courses remains the same as heretofore, $70 per year.

The registration fee of $5.00, which is included in the tuition charge, must be paid at the beginning of each semester before the student enters any classes.

A fee of $2.00 is charged for any special examination.

The incidental fee is $10.00 a semester, or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

A student obliged to leave the University within two weeks after the beginning of the semester may have the foregoing amounts refunded with the exception of the registration fee. A student leaving within the first half of the semester receives a rebate of one-half the incidental expenses, and one-half of the tuition. No other rebate is made.

The cost of text-books will average about $15.00 a year for the course. These may be bought at the college store. The expense may be decreased by buying second-hand books.

Students in the laboratories and shops pay certain charges to cover the cost of materials and maintenance. These charges are as follows: chemistry, per semester, about $3.00; bacteriology, per course, $3.00; physics, per course, $2.50 to $3.50; pharmacy, per semester, about $3.50; mineralogy, $2.00; biology, per course, $2.00 to $3.00; civil engineering, $2.00 to $5.00; electrical engineering, per course, $2.50; mechanical engineering, per course, $2.00; shop work, per course, $4.00 to $5.00.

The largest item of expense is board. At the Commons, the university boarding house, the price is $2.75 a week exclusive of meat fish and eggs. The average cost is about $3.50 a week. Board may be obtained in clubs or private families at prices ranging from $3.50 to $4.50 a week.

The charge for rooms in Oak Hall is eighty-five cents a week for each student, when two occupy a room. This pays for heat and light, and for the lighting and care of the halls, public rooms, and dormitory.

Students in Oak Hall supply their own furniture with the exception of a cot bed. Applicants for rooms in Oak Hall or Mt. Vernon House should make early application to the Secretary, as the accommodations are limited. Students are required to furnish three sheets and two pillow cases in addition to the other bedding. All students, except incoming freshmen, who reserve rooms in Oak Hall will be required to make a deposit of $5.00 before August first.

The University does not assume responsibility for furniture left by students in their rooms. Such furniture is left at the student's risk.

Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 to $3.00 a week if occupied by two persons.

Expenses in connection with athletics are met by voluntary subscriptions. They amount to $10.00 a year.

Women students who do not live at their own homes are required to room and board at the Mt. Vernon House. All the rooms in this house

are supplied with the larger articles of furniture. Six of the ten rooms are corner rooms. For rooms of the first grade, board, heat, and light the charge is $85.00 a semester for two in a room. For the second grade rooms the charge is $81.00. No discount is made for absence except for prolonged illness.

Plans have been accepted for a new dormitory, which, it is hoped, will be ready for occupancy in 1910.

A four story building in the village of Orono, known as the University Inn privides board and rooms for a number of students.

Each student is required to deposit with the treasurer a bond, with two names as sureties, in the amount of $150.00 to cover bills. Blank forms for bonds will be furnished by the Secretary upon application. Those who keep a sufficient deposit with the Treasurer to cover the bills of one semester will not be required to furnish a bond. The deposit required from Maine students is $95.00 for those who board at the Commons or Mt. Vernon House, and $35.00 for those who do not. For students outside of Maine these amounts are $100.00 and $40.00. For engineering students from outside of Maine the amount is $115.00. This deposit is in addition to the registration fee, and must be paid at the beginning of each semester. *No student will be allowed to graduate who is in debt to the treasury.*

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self-help may be obtained upon application.

LOANS

Tuition Loans.

Residents of Maine who need assistance and maintain a satisfactory record may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the College of Law.

Borrowers are required to give notes with satisfactory endorsement. The loans bear interest at six per cent. per annum, and are due at the rate of $30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the Faculty is accepted as an endorser.

Loans are granted by a committee consisting of the President and two other members of the Faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in the preceding June. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall semester. Appli-

cations should be made not later than October 10. They must be made to the President upon blanks to be obtained from the Secretary of the Faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans, by October 10.

The Kittredge Loan Fund

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security, but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship, thirty dollars, was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University, of the class of 1879, and is awarded to a member of the junior class to be selected by the President and the Faculty.

The Western Alumni Association Scholarship, tuition for the sophomore year, is awarded to that student taking a regular course, whose deportment is satisfactory, and who makes the best progress in all studies during his freshman year.

The Junior Exhibition Prize, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

The Sophomore Declamation Prize, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

The Walter Balentine Prize, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., a graduate of the University of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

The Kennebec County Prize, twenty-five dollars, the gift of Hon. William T. Haines, Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best essay on applied electricity.

The Franklin Danforth Prize, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of 1877, in memory of his father, Franklin Danforth, is awarded

to that member of the senior class in the Agricultural course who attains the highest standing.

The Pharmacy Prize, five dollars, is awarded to that student in the pharmacy department who attains the highest standing in chemistry, if that standing is satisfactory, in the last year of his course.

The Holt Prizes, the gift of Erastus Eugene Holt, A. M., M. D., LL. D., of Portland, are given to the three students of the senior class who show the greatest improvement in their rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body, devised by Dr. Holt.

The Boston Alumni Association Scholarship, thirty dollars, is awarded to that member of the junior class who makes the most satisfactory progress in all studies during the junior year, and whose deportment is satisfactory, and who needs financial assistance.

The New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. In 1908-9 it was awarded to the student who excelled in debate.

The Pittsburg Alumni Association Scholarship, yielding tuition for one year, is awarded to a member of the junior class in the College of Engineering, to be selected by the President and Professors in that College.

Mr. L. C. Bateman, of the *Lewiston Journal,* offers a prize of ten dollars for the best essay on Dairy Bacteriology, by any student in any agricultural course.

Hon. E. B. Winslow, of Portland, offers a cash prize of ten dollars to be awarded for the highest scoring butter, made and exhibited by any person who has taken the dairy course at the University of Maine. The butter is to be shown at the annual meeting of the Maine Dairy Association.

The American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the Faculty, to the member of the senior class in Pharmacy who has the best record in his college course.

The Gilbert M. Gowell Scholarships, two scholarships of thirty dollars each, given by a member of the class of 1908, to be awarded to two students in the four year's Agricultural courses under the following conditions: These scholarships are to be awarded to students who have completed the first or second years work in the College of Agriculture. One-half of each prize is to be placed to the credit of the student on his term bill at the beginning of each semester of the following year.

The scholarships are to be awarded to students who are in need of financial assistance, who are making the most satisfactory college record, and who have not been registered in any other course in the University. The selection of the students is to be made by the President and Faculty of the College of Agriculture.

ADMISSION

General Requirements.—Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one semester will be accepted in place of a bond. In the College of Law the fees must be paid in advance, and no bond or deposit is required, The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of 80 per cent. must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Graduates of a college of equivalent standing who wish to enter a technical course are admitted to the junior class without examination, provided their course has covered a sufficient amount of work in mathematics, physics, and chemistry.

Special Recommendations.—A good preparation in algebra and geometry is most important for those who expect to enter engineering courses.

The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing for the classical courses should devote especial attention to Greek and Latin composition, Roman history, and Latin pronunciation according to the Roman method.

Special Students.—Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, rather than for those who are incompetent to pursue a regular course.

No examinations are required for admission to the special and extension courses in agriculture.

The terms of admission to the College of Law are stated under the proper heading.

Admission by Examinations.

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person, who will consent to conduct examinations on the days appointed in June. If possible these examinations should be in charge of the principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately accompanied by the endorsement of the examiner. The examinations must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Secretary of the Faculty. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their Principals regarding their fitness to take the examinations, and to undertake college work. The examinations set by the College Entrance Examination Board will be accepted by the University. A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission by Certificate

Certificates for admission to the freshman class without examination are accepted only from graduates of schools approved by the New England College Entrance Certificate Board (except in the case of schools outside of New England). A list of approved schools will be sent upon application. They will not be accepted for non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the Principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

Certificates from schools approved by the New England College Entrance Certificate Board will be accepted at any of the institutions co-operating to maintain it. Any Superintendent or Principal desiring to have a school under his charge placed upon the approved list should apply before April 1st to the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown St., Providence, R. I.

ENTRANCE REQUIREMENTS

The requirements for admission are those adopted by the Maine Association of Colleges and Preparatory Schools.

To gain admission to any of the courses leading to the degrees of B. A. or B. S., 29 points must be offered by the candidates, according to the following schedules (to count 2 points, a subject must be pursued for one school year, with five recitation periods, of at least 45 minutes each, a week):

For the B. A. Courses

Required Subjects

Foreign languages	8 points
English	6 points
History	2 points
Mathematics	6 points

Optional Subjects (7 Points to be Chosen)

(Not less than four points of any one foreign language will be accepted, except under special conditions.)

Each year of Greek	counts	2 points
" " Latin	"	2 "
" " French	"	2 "
" " German	"	2 "
Chemistry (including note-book)	"	2 "
Physics (including note-book)	"	2 "
Solid Geometry	"	1 point
Roman History	"	1 "
Greek History	"	1 "
English "	"	1 "
American History and Civil Government	"	1 "

The requirement in History must include either a year of Greek or Roman History, a year of English or American History, or a year of American History and Government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

For the B. S. Courses

(Engineering, Agriculture, Chemistry, Forestry, Pharmacy, and Domestic Science.)

Required Subjects

College Entrance English	counts 6 points
Algebra	" 4 "
Plane Geometry	" 2 "
Solid Geometry (College of Technology and Forestry Course)	" 1 point

Optional Subjects (16 or 17 Points to be Chosen)

(Of these, two years of one modern language, one year of science, and one year of history must be taken. Candidates entering a B. S. course and offering four years of Latin may complete their entrance credits without a modern language, but must take at least four credits in modern language in college.)

Each year of French	counts 2 points
" " German	" 2 "
" " Latin	" 2 "
" " Greek	" 2 "
Advanced Mathematics (Algebra and Trigonometry)	" 2 "
* Mechanical Drawing (for technical courses)	" 1 point
* Manual Training (for technical courses)	" 1 "
Chemistry (including note-book)	" 2 points
Physics (including note-book)	" 2 "
Physiography (one-half year or one year)	counts 1 point or 2 "
Biology (including note-book)	counts 2 "
Botany (including note-book)	" 2 "
Zoölogy (including note-book)	" 2 "
Physiology	" 1 point
Roman History	" 1 "
Greek History	" 1 "
English History	" 1 "
American History and Civil Government	" 1 "

Candidates for admission to the B. S. courses who are well prepared in all the required subjects, but whose high-school course has included other subjects, instead of some of the electives mentioned above, will be allowed to substitute any subjects that will furnish a real equivalent. Each case of such proposed substitution will be considered upon its merits.

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* Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing on the basis of one credit for five forty-five minute periods per week for one year in one subject.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on Descriptive Geography, Arithmetic, English Grammar, Physiology, United States History, and Algebra through simple equations of the first degree. Graduates of high schools will be admitted upon recommendation of the Principal.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject.

Languages

ENGLISH.—The entrance examination in English presupposes courses in Composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in Composition particularly is of slow growth, and requires almost daily cultivation during a long period of time. Books to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course work in the elements of Rhetoric such, for example, as is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination on the B list of books will include incidentally questions on the syntax of sentences, and on general grammatical principles.

The grammatical sense is slowly acquired. Grammar, therefore, should be studied in the early grades and kept up from year to year and not formally introduced in some one grade, as the seventh or eighth.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Prospective candidates are advised to give special attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The candidate is not expected to have a detailed knowledge of these books;

but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1910, 1911, and 1912, the books are as follows: A. Group I (two to be selected): Shakespeare's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night. Group II (one to be selected): Bacon's Essays; Bunyan's Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography. Group III (one to be selected): Chaucer's Prolog; Spenser's Faerie Queen, (selections); Pope's The Rape of the Lock; Goldsmith's Deserted Village; Palgrave's Golden Treasury, (First Series) Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns. Group IV (two to be selected): Goldsmith's Vicar of Wakefield; Scott's Ivanhoe, Quentin Durward; Hawthorne's House of the Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens's Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna Doone. Group V (two to be selected): Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc, The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (selected); Ruskin's Sesame and Lilies. Group VI (two to be selected): Coleridge's Ancient Mariner; Scott's Lady of the Lake; Byron's Mazeppa, The Prisoner of Chillon; Palgrave's Golden Treasury, (First Series) Book V, with special attention to Wordsworth, Keats, and Shelley, Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's Courtship of Miles Standish; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, and Pheidippides.

The B list of books is for thorough *study*. The examination will be upon subject matter, form, and structure.

B. Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

French.—The admission requirements in elementary and advanced French are those recommended by the Modern Language Association of America.

I. Elementary French

At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life, or

based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; order of words in the sentence, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English); and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographic sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *Le roi des montagnes;* Bruno, *Le tour de la France;* Daudet, easier short tales; De la Bédollière, *La Mére Michel et son chat;* Erckmann-Chatrian's stories; Foa, *Contes biographiques* and *Le petit Robinson de Paris;* Foncin, *Le pays de France;* Labiche and Martin, *La Poudre aux yeux* and *Le voyage de M. Perrichon;* Legouvé and Labiche, *La Cigale chez les fourmis;* Malot, *Sans famille;* Mairet, *La tâche du petit Pierre;* Mérimée, *Colomba;* extracts from Michelet; Sarcey, *Le siège de Paris;* Verne's stories.

II. Advanced French

At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant

practice in giving French paraphrases, abstracts or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's stories; Augier and Sandeau, *Le Gendre de M. Poirier;* Béranger's poems; Corneille, *Le Cid* and *Horace;* Coppée's poems; Daudet, *La belle Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's letters; Hugo, *Hernani* and *La Chute;* Labiche's plays; Loti, *Pêcheur d'Islande;* Mignet's historical writings; Molière, *L'avare* and *Le bourgeois gentilhomme;* Racine, *Athalie, Andromaque,* and *Esther;* George Sand's plays and stories, Sandeau, *Mademoiselle de la Seiglière;* Scribe's plays; Thierry, *Récits;* Vigny, *La canne de jonc;* Voltaire's historical writings.

At the end of the fourth year the pupil should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: *Beaumarchais's Barbier de Séville;* Corneille's dramas; the elder Dumas's prose writings; the younger Dumas's *La Question d'argent;* Hugo's *Ruy Blas,* lyrics, and prose writings; La Fontaine's fables; Lamartine's *Graziella;* Marivaux's plays; Molière's plays; Musset's plays and poems; Pellissier's *Mouvement littéraire au* XIX *siècle;* Renan's *Souvenirs d'enfance et de jeunesse;* Rousseau's writings; Sainte-Beuve's essays; Taine's *Origines de la France contemporaine;* Voltaire's writings; selections from Zola, Maupassant, and Balzac.

The examinations of the College Entrance Certificate Board in Elementary French will be accepted for four points, and that in advanced French for two additional points.

German.—The admission requirements in elementary and advanced German are those recommended by the Modern Languages Association of America.

I. Elementary German

The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the

inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil, first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schweigersohn;* Gerstäcker, *Germelshausen;* Heyse, *L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *Die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Seidel, *Märchen,* Stökl *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;* Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should predominate. A good selection of reading matter for the second year would be Andersen, *Märchen,* or *Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in

writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Vergangenheit,* for example, *Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué, *Undine;* Gerstäcker, *Irrfahrten;* Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnheim;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen,* for example, *Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterseher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for four points, and that in advanced German for two additional points.

Latin.—The grammar, including prosody; Cæsar's Gallic War, books I-IV; Cicero's four orations against Catiline, and those for Archias and for the Manilian Law; Vergil's Æneid, books I-VI, and the equivalent from Vergil or Ovid of an additional book; the sight translation of Latin passages of moderate difficulty; the translation into Latin of simple English sentences, and of easy narrative passages based on the prose authors read. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted for those prescribed.

Greek.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescribed.

History

Greek History.—History of Greece, to the capture of Corinth, 146 B. C. Myers, Morey, or Botsford.

Roman History.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

English History.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

United States History and Civil Government.—A knowledge such as may be obtained from Fiske, Hart, Montgomery, or McLaughlin's History of the United States.

Mathematics

Algebra.—The elements, equations of the first degree, radicals, the theory of exponents, quadratic equations, ratio and proportion, arithmetical and geometrical progression, the binomial theorem. The preparation in algebra should include, in addition to the mastery of the principal topics in one of the standard elementary text-books, drill with a more advanced text-book or with some standard exercise book. Candidates cannot safely give to algebra less than the two full years called for in the algebra requirements, unless their preparation in arithmetic has been exceptionally thorough. Candidates for the short course in pharmacy will be examined on no topics beyond simple equations of the first degree.

Plane Geometry.—The usual school course. The requirement in plane geometry and solid geometry is covered by the syllabus of plane and solid geometry issued by the Association of Mathematical Teachers in New England. This syllabus is recommended to the attention of teachers. Numerical exercises, original propositions, and the neat and careful construction of figures should not be neglected. The examination will include original propositions for demonstration or construction.

Solid Geometry.—See statement above under plane geometry. The examination will be planned to test the candidate's ability to apply the theorems to the computation of surfaces and volumes, as well as his readiness in demonstration. Much attention should be given to numerical exercises and strict accuracy should be insisted upon.

Trigonometry.—One entrance credit is given for a half year's work in trigonometry, which may be in plane trigonometry alone or in both plane and spherical trigonometry. Any of the standard text-books may be used. The course should include considerable practice in the solution of problems by using the natural values of the functions and also by

logarithms. Candidates wishing to pass the work in trigonometry of the Freshman year in advance are required to take at the University a more complete examination than is required for entrance credit.

Advanced Algebra.—Binomial theorem with negative and fractional exponents, permutations, combinations, partial fractions, logarithms with applications to compound interest, imaginaries, theory of variations, inequalities, graphs of equations of the third and fourth degrees, theory of equations including the remainder theorem, solution of equations by synthetic division, Descartes's rule of signs, relations between the roots and the coefficients of an equation, imaginary roots.

Sciences

* Chemistry.—The necessary ground is covered by the following text-books: Fisher, Remsen, Roscoe (inorganic part), Shepard, Storer, and Lindsay Williams.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoölogy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy, but in such cases it must be treated as an integral part of the subject under consideration.

REQUIREMENTS FOR GRADUATION

The college year is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for a semester in the College of Arts and Sciences is fourteen hours a week (exclusive of physical training and military science), leading to two and

* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certificated in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

four-fifths credits. In the other Colleges the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work, and other studies not requiring preparation, count as half time, unless otherwise specified. Such studies are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

Except in the College of Law, the Short Pharmacy Course, and the School Course in Agriculture, candidates for graduation are required to complete a four years' course of study by securing twenty-five or thirty credits, according to the course chosen.

ORGANIZATION OF THE UNIVERSITY

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together form a unit. The organization is as follows:

College of Arts and Sciences
- The Bachelor of Arts Courses
- The Summer Term

College of Agriculture
- The Agricultural Courses
- The Forestry Course
- The Domestic Science Courses
- The Extension Courses
- The School Course in Agriculture

College of Technology
- The Chemical Course
- The Chemical Engineering Course
- The Civil Engineering Course
- The Mechanical Engineering Course
- The Electrical Engineering Course

College of Pharmacy
- The Pharmacy Course
- The Short Course in Pharmacy

College of Law

The Agricultural Experiment Station

GENERAL STATEMENT

The College of Arts and Sciences, the College of Agriculture, the College of Technology, and the College of Pharmacy offer four year's courses leading to the bachelor's degree. The College of Law offers a three year's course leading to the bachelor's degree.

The College of Arts and Sciences has the following graduation requirements:

1. English, one year, five hours a week, or the equivalent divided between two years, taken in college.

2. French and German, one year each, five hours a week, taken in college or preparatory school.

3. Science (chemistry, physics, or biology), one year, five hours a week, taken in college or preparatory school.

4. Courses in the classical departments, one year, five hours a week, taken in college.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, two hours a week.

The following courses may be elected to fulfill the conditions under No. 4:

Greek 1, Greek 2, Greek 13, Greek 14, Greek 24; Latin 1, Latin 2, Latin 25; Philosophy 6.

The College of Agriculture, the College of Technology, and the College of Pharmacy have the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two years.

2. Mathematics, one year, five hours a week.

3. Science (chemistry, physics, or biology), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (Greek, Latin, German, or French), the equivalent of one year, five hours a week. The requirement for Latin is fulfilled by completing Latin 1 and Latin 2; and for Greek by completing Greek 1 and Greek 2. A student beginning German or French must receive at least two credits in the subject to count it toward a degree.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, two hours a week.

The science requirement in each college demands a year's work in some one science, and is not fulfilled by fractions of a year's work in two or more sciences. In making up the language requirement, work done in preparation for college may be counted, but two years' preparatory study will be reckoned as one year of college work.

Twenty-five credits (one credit is given for a recitation course that meets five hours a week, or for a laboratory course that meets at least ten hours a week, for one half year) are required for graduation in the College of Arts and Sciences; thirty credits are required for graduation in the College of Technology, the College of Agriculture, and the College of Pharmacy.

The requirements for admission to the College of Law are stated in connection with the description of that college.

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

GEORGE EMORY FELLOWS, Ph. D., L. H. D., LL. D.
President of the University

JAMES STACY STEVENS, M. S., LL. D.
Dean and Professor of Physics

MERRITT CALDWELL FERNALD, Ph. D., LL. D.
Emeritus Professor of Philosophy

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological Chemistry

JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy

JOHN HOMER HUDDILSTON, Ph. D. *Professor of Greek*

GILMAN ARTHUR DREW, Ph. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, Ph. D.
Professor of Romance Languages

GEORGE DAVIS CHASE, Ph. D. *Professor of Latin*

CAROLINE COLVIN, Ph. D. *Professor of History*

CHARLES DAVIDSON, Ph. D. *Professor of Education*

ROBERT JAMES SPRAGUE, Ph. D.
Professor of Economics and Sociology

WALLACE CRAIG, Ph. D. *Professor of Philosophy*

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, Ph. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, Ph. D. *Professor of German*

GUY ANDREW THOMPSON, M. A. *Professor of English Literature*

WINDSOR PRATT DAGGETT, Ph. B.
Professor of Public Speaking

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

MYRON TRACY SCUDDER, M. A.
Professor of Education (Summer Term)

EDWARD STONE HAWES, M. A.
Professor of English (Summer Term)

MINTIN ASBURY CHRYSLER, Ph. D.
Associate Professor of Botany

CHARLES WILSON EASLEY, PH D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
* HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
LEON ELMER WOODMAN, M. A. *Assistant Professor of Physics*
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
CHARLES HOEING, PH. D.
Assistant Professor of Latin (Summer Term)
WALTER EVERETT PRINCE, M. A. *Instructor in English*
WILLIS FLYE WASHBURN, B. S. *Instructor in Chemistry*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
GEORGE EDWARD PEARSON, M. A. *Instructor in English*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
ROBERT RUTHERFORD DRUMMOND, B. S.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
GEORGE ALVIN SCOTT, B. S. in E. E. *Instructor in Physics*
BENJAMIN ENGLE KRAYBILL, PH. B.
Instructor in Industrial Chemistry
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
TRUMAN LEIGH HAMLIN, M. A. *Instructor in Mathematics*
WALTER HOWARD WILBUR, B. S. *Instructor in Mathematics*
EUGENE LOUIS RAICHE, *Instructor in French (Summer Term)*
LAURIE LORENZO BURGESS, PH. D.
Instructor in Chemistry (Summer Term)
ALFRED BLANCHARD KERSHAW, A. M.
Instructor in English (Summer Term)
ALICE MIDDLETON BORING, A. M. *Instructor in Zoölogy*
ERNEST CLAUDE DREW, B. S. *Tutor in Physics*

GENERAL INFORMATION

THE COLLEGE OF ARTS AND SCIENCES comprises:
The Bachelor of Arts Courses
The Summer Term

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

* Absent on leave.

1. Men and women who desire to complete their studies with a course in general culture.

2. Men and women who desire to enter professional schools which require a collegiate degree. The B. A. degree of the University of Maine is accepted as of the first rank at the graduate departments of our best universities.

3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 49-60. They are practically the same as for other New England colleges and may be met by a four years preparatory course in a good high school or academy.

FRESHMAN STUDIES

The work of the first year is conditioned somewhat on the subjects offered for admission.

It is recommended that all students in this college register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR INSTRUCTORS

Each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work; biology (including zoölogy, botany, physiology, and entomology), chemistry, economics, education, English, German, Greek, history, Latin, mathematics and astronomy, philosophy, physics, Romance languages (including French, Spanish, and Italian).

In many cases the selection of a major subject need not be made before the beginning of the sophomore year. A student may change his major subject with the consent of the professors in charge of the department which he leaves and the one which he wishes to enter; but no student will be graduated who has not finished all the work required for graduation in some one department, no matter how much work he may have done in other departments. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this amount must be made up from such other related departments as the professor under whose direction the major is taken may prescribe. The remainder of the student's work may be selected from any depart-

ment or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject, and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his major instructor, and during the remainder of the course this instructor acts as chief adviser in all matters relating to the course, and is a representative of the student before the faculty.

THE BACHELOR OF ARTS COURSES

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The course is a 25 credit course and is regularly completed in four years; but a bright student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years on their college course.

No outline of the courses in the College of Arts and Sciences is given in the catalog, but students may have such an outline presented to them by applying to the professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology.

GRADUATE COURSES

The candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and master's degree.

No work done before the conferring of the bachelor's degree can be counted towards the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study shall be submitted to and approved by the committee on graduate degrees.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects

which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the required fifteen hours.

THE SUMMER TERM

The summer term of the University of Maine is not a summer school, but so far as is practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the college entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. College students who may wish to anticipate work in their course, or who may have back work in arrears. A student should be able to make one credit (the equivalent of a five hours' study for eighteen weeks) during the summer term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the University books.

Courses of Study

During the summer of 1909 courses were offered in the following subjects: Botany, Chemistry, Education, English, French, German, History, Latin, Mathematics, and Physics. These courses are described in connection with the courses offered at the University during the remainder of the year.

Lectures, 1909

Dean J. N. Hart,	Modern Astronomy (with stereopticon)
Professor M. T. Scudder,	Playgrounds of America (with stereopticon)
Professor A. P. Raggio,	Readings from Dante's *Inferno* in various languages
M. and Mme. Raiche,	Reading of a two part French Play
Dean J. S. Stevens,	Experimental Lecture on Electric Waves

Vesper Services

A brief religious service is conducted each Sunday afternoon at 4.00 P. M. in the Library. This consists of a song service and a brief address.

Library

Throughout the summer term the University library of 40,000 volumes and the reading room, containing about three hundred periodicals and the Maine daily papers, is open from 9.00 A. M. to 12 M., and from 2.00 to 5.00 P. M. daily, except Saturday afternoon and Sunday.

The library privileges ordinarily accorded to University students, including the home use of books, are extended to students in the summer courses.

Laboratories, Museums, and Observatory

The laboratories belonging to the departments of physics, chemistry, and botany are available for use of the students. In the physical and chemical laboratories there is ample provision for carrying on the various courses from the preparatory work to that of the graduate student in the University.

The botanical laboratory is in charge of the professor of biology. The student is furnished with microscope, specimens, and preparations for advanced work.

The fees for these courses may be found on page 45.

The museum is illustrative of the rocks and fauna of Maine, and is open at stated periods for the use of the students.

The observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The work of the observatory is explained by Professor Hart in evening lectures.

Teachers' Agency

The authorities of the Summer Term have made arrangements with a Teachers' Agency whereby the students in attendance may secure the benefits of the agency without paying the usual registration fee. Fre-

quent calls are received each year for teachers, the demand greatly exceeding the supply. Every effort will be made to secure satisfactory positions for properly qualified teachers.

Expenses

Tuition for the term of six weeks, covering all charges for instruction in any number of courses that the student may elect, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

For residents of Maine, $12.00.

For residents of other states, $18.00.

Board and room in the University buildings, including light and the necessary furniture, $24 for the term. The charge for rooms without board is $1.00 per week; and for board at the Commons $3.50 a week. Board may also be had at the Mount Vernon House for $5.00 a week. for $5.00 a week.

Recreation

Most of the class work is held during the forenoon, leaving the afternoon and evening free for study and recreation.

On the campus are several excellent tennis courts. The neighboring country affords many attractive excursions, on foot, by bicycle, carriage, or electric cars. Maine's famous seaside resort, Bar Harbor, is but one and one-half hours distant by rail, while Mount Kineo and Moosehead Lake are at only a slightly greater distance and easily accessible.

Within easy riding or wheeling distance are Lakes Pushaw and Chemo, as well as several attractive mountains.

In General

Prospective students are invited to consult Dean Stevens, who is in charge of the summer session, or any of the other instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privileges.

If there should be a considerable demand for other studies than those named, arrangements will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1909. Unimportant changes are likely to be made for the coming term.

DEPARTMENT OF EDUCATION

Advisory Courses

For students who are preparing to teach in Secondary Schools the following courses have been arranged for (1) teachers of English, (2) teachers of Latin, (3) teachers of Modern Languages, (4) teachers of Mathematics, (5) teachers of Physical Sciences, (6) teachers of Natural Sciences, (7) teachers of Agriculture. These courses are advisory only, and election must be made subject to the requirements of the time schedule, but it is believed that they will be of assistance in determining the relative importance of subjects aside from the major subject chosen.

Freshmen are advised to take the required subjects with the following additions: for (1), any language, preferably Latin, and History 1 and 2; for (2), Latin 1 and 2 and one science; for (3), the modern language not taken in preparation and Latin 1 and 2; for (4), German 1 and 2 and Chemistry 1, 2, 3, and 4; for (5) and (7), a modern language and Chemistry 1, 2, 3, and 4; for (6), a modern language and Biology 1, 2, 21, 22.

For upper classmen, the following electives are advised:

For Teachers of English:

Sophomore Year

First semester: English 2a, 6, 8; German 3a or 1; French 3a or 1; Chemistry 1, 3; History 3; Education 1.

Second semester: English 2b, 7, 9; German 3b or 2; French 3b or 2; Chemistry 2, 4; History 4; Education 2.

Junior Year

First semester: English 10, 12, 15, 17; Education 3; Economics 1a; Philosophy 1.

Second semester: English 11, 13, 14; Education 4; Economics 2a; Biology 4.

Senior Year

First semester: English 19, 20, 22; Education 5; History 7; Philosophy 6.

Second semester: English 21, 23, English course on secondary requirements; Education 6, 8; History 8; Philosophy7.

For Teachers of Latin:

Sophomore Year

First semester: Latin 3, 6; English 2a, 6; second year of modern language; History 1; Education 1; mathematics or science.

Second semester: Latin 4, 6; English 2b, 7; second year of modern language; History 2; Education 2; mathematics or science.

Junior Year

First semester: Latin 7, 9, 6, 11; third year of modern language; Economics 1a; Education 3.

Second semester: Latin 8, 10, 6, 12; third year of modern language; Economics 2a; Education 4.

Senior Year

First semester: Latin 15, 19a, 18, 13; English 8; third year of modern language; Philosophy 1; Education 5.

Second semester: Latin 16, 19b, 20, 21, 14, review of secondary texts; Philosophy 4; Education 6, 8.

For Teachers of Modern Languages:

Sophomore Year

First semester: German 3a; French 3a; Latin 3; English 2a, 6; History 1; mathematics or science.

Second semester: German 3b; French 3b; Latin 4; English 2b, 7; History 2; mathematics or science.

Junior Year

First semester: German 4a, 5a, 11; French 4a, 5a; Education 1; Economics 3a.

Second semester: German 4b, 5b; French 4b, 5b; Education 2, Economics 8.

Senior Year

First semester: German 7a, 8a; French 6a, 7a, Spanish or Italian; Philosophy 1 or History 5; Education 5.

Second semester: German 7b, 8b; French 6b, 7b, Spanish or Italian; Philosophy 4 or History 6; Education 8.

For Teachers of Mathematics:

Sophomore Year

First semester: Mathematics 6b, 7; English 2a; German 3a; Physics 1; Drawing 1; Education 1.

Second semester: Mathematics 8; English 2b; German 3b; Physics 2, 5; Drawing 2; Education 2.

Junior Year

First semester: Mathematics 19, 20, or 12; French 1 or 3a; Physics 8, or Physics 19; Education 3; Philosophy 1.

Second semester: Mathematics 11, 9, 15, or 13; French 2 or 3b; Education 4; Philosophy 4.

Senior Year

First semester: Mathematics 10, 12, or 20; Economics 1a; History 7; Education 5.

Second semester: Mathematics 13 or 15, review of secondary mathematics with methods; Physics 9; History 8.

For Teachers of Physical Sciences:

Sophomore Year

First semester: Chemistry 5, 14; German 3a or French 3a; Mathematics 6b, 7; English 2a; Education 1.

Second semester: Chemistry 6, 15; Mathematics 8; German 3b or French 3b; English 2b; Education 2.

Junior Year

First semester: Chemistry 7; Physics 1; Biology 1; English 8; Education 3.

Second semester: Chemistry 8; Physics 2, 5; Botany 1; English 9; Education 3.

Senior Year

First semester: Chemistry 16; Physics 8, 9, 14; Economics 7a; History 7; Education 5.

Second semester: Chemistry 18; Physics 10 or 7; Physics 3, methods for secondary schools; Economics 8; History 8; Education 8.

For Teachers of Natural Sciences:

Sophomore Year

First semester: Zoölogy 4, 7; Botany 1; Chemistry 1, 3; English 2a; German 4a, or French 4a; Education 1; Drawing 1.

Second semester: Zoölogy 1, 8; Chemistry 2, 4; English 2b; German 4b or French 4b; Education 2; Drawing 2.

Junior Year

First semester: Botany 3; Zoölogy 2; English 6; Physics 12; Education 3.

Second semester: Zoölogy 3, 10; Botany 4, 5; English 7; Physics 5; Education 4. Zoölogy 10 or Botany 4.

Senior Year

First semester: Elective biology; Economics 3; Education 5; English 8; History 7.

Second semester: Zoölogy 5, elective biology; Economics 6; English 9; Education 8; History 8.

Note—As a preparation for the course in Latin, students should have taken four years of Latin and either three years of Greek or two of one modern language and one of another in the secondary school. If the student desires to prepare to teach both Greek and Latin, he should take three years of Greek and four of Latin in college. If he would omit Greek, he should take one year of the modern language in which he had most credits when he entered and two of another.

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek.

ASTRONOMY

Courses in astronomy are described under the department of mathematics.

BIBLIOGRAPHY

PROFESSOR JONES

1. BIBLIOGRAPHY.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbinding and the care of books; library processes and aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.* Spring semester.

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen. Fall semester.

BIOLOGICAL CHEMISTRY

The courses in this department are described under the College of Agriculture.

BIOLOGY

PROFESSOR DREW; PROFESSOR CHRYSLER; MR. CONSER; MISS BORING

The course in General Biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

1. GENERAL BIOLOGY.—This course is designed to be part of the education of any college student and is open to all candidates for the B. A.

degree, as well as to more special students. It is regarded as essential for all students in the College of Agriculture, including those taking the Forestry Course, as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further work in either zoölogy or botany. In the laboratory each student studies with the microscope, or dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily.

Recitations, *three hours a week;* laboratory, † *four hours a week.* Throughout the year.

2. Vertebrate Zoölogy.—Types of the Vertebrata are studied and their structures compared. Careful dissections are made of representatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by General Biology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

3. Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and the methods of preparing them for microscopic study. Students thus become familiar with hardening, embedding, sectioning, staining, and mounting, and to some extent with injecting blood vessels for the microscopic study of the vascular supply of organs. Vertebrate Zoölogy is required as a preparation for this course. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

5. Animal Physiology.—Intended for those who already have an elementary knowledge of general biology and physiology. This course deals with the functions of the organs of the body and is accompanied by laboratory work to illustrate their activities. It should be preceded by Animal Histology. Recitations, *three hours a week;* laboratory, † *four hours a week.* Spring semester.

6. Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes lectures on the comparative embryology of vertebrates and laboratory work on the frog, fish, and chick, and to some extent on the pig. Animal Histology is required as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

7. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student.

It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

8. Entomology.—This course opens with the study of the anatomy and development of insects, after which typical species of the Orders are studied with reference to their structure, habits, life-histories, and adaptations. Due attention is given to the economic problems. General Biology is required as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

9. Forest Zoölogy.—This course deals with the animals that are of economic importance in forests. A portion of the time is given to the study of economic problems with which mammals and birds are concerned and the remainder to the study of the habits, life-histories, and methods of control of injurious and beneficial forest insects. Entomology is required as a preparation. Recitations, *two hours a week.* Fall semester.

10. Plant Histology.—The microscopic structure of the higher plants; the various tissues; the root, stem, leaf, and spore-bearing organs, the adaptations of plants to external conditions, considered from the standpoint of structure; killing, sectioning, staining, and mounting of plant tissues. This course must be preceded by General Biology. Recitations, *Two hours a week;* laboratory, † *four hours a week.* Fall semester.

11. Plant Physiology.—The plant is considered from the standpoints of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth; movement in response to stimuli. This course must be preceded by General Biology, and should follow Plant Histology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

12. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. *The time varies and the work may be continued a number of semesters.* Fall and spring semesters.

13. Elementary Botany.—Studies in the structure and functions of the organs of plants; agents of pollination and the distribution of seeds and fruits; exercises in plant analysis and the identification of species in the field. Required of Short Pharmacy students. Recitations, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

14. Pharmaceutical Histology.—Exercises on the use of the microscope; the magnification of objects, and microscopic measurements. A study of cells and tissues, and food products found in them; followed by exercises in the detection of the common adulterants of familiar drugs. Open to students who have taken elementary botany. Recitations, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

15. Agricultural Botany.—This course deals with the special botany of farm crops and forage plants; the distribution and habits of growth of weeds; the purity and viability of seeds. Some systematic study of Maine weeds and grasses is required, but greater attention is given to the structure and life processes of the plants under consideration for economic ends. General Biology is a prerequisite. Recitations, *two hours a week;* field or laboratory work, † *two hours a week.* Fall semester.

16. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by General Biology and may profitably be preceded by Plant Histology. Recitations, *two hours a week;* laboratory, † *two hours a week.* Spring semester of odd years.

17. Forest Botany.—This course consists of a systematic study of trees and shrubs, particular attention being given to those of the eastern states, and the identification of them in summer and winter aspects. Special attention is given to the forest trees of commercial value and their geographical distribution. Field work in the identification of local species and preparation of a forest herbarium are required in the autumn and early winter months. The laboratory work includes a study of the microscopic structure of the vegetative and reproductive parts of typical gymnosperms and angiosperms of arboreal habit. This course must be preceded by General Biology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Throughout the year.

Summer Term (Mr. Conser)

1. Field Botany.—This course will deal with the kinds, habits, and habitats of plants about the University, including short excursions to several outlying regions for collecting and identifying species in field and forest. Attention will also be given to methods of pollination, modes of migration, association and mutual benefits of flowers and insects, and other factors of environment such as light, heat, soil, water, gravity, and the effect of other plants. There will be a few lectures, some reference reading, and a small amount of laboratory work confined mostly to rainy days.

2. Laboratory Botany.—A course designed primarily for teachers and dealing with laboratory methods. Exercises will be given in connecting and preserving material of different kinds in different ways. Considerable time will be devoted to life, based on the phenomena of absorption and movement, of experimental work on the physics and physiology of plant solutions, transpiration, respiration, carbon assimilation, and reproduction. Attention will also be given to the teaching of botany in secondary schools.

ECONOMICS AND SOCIOLOGY

Professor Sprague; Mr. Pearson

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics, production, distribution and consumption, values, commerce, labor problems, and various other topics in this field of study. Required of junior engineers and of all who take course 1b. Open to others by special permission. Text-book and general discussions. *Two hours a week.* Fall semester.

1b. Advanced Political Economy.—This course is devoted to a more exhaustive study of special subjects in the economic field, labor unions, methods of arbitration, tariff history and problems, trusts and their regulation, railroads, insurance, business organizations, immigration, exhaustion of natural resources, and other special topics. This course is open to all who have had or are taking course 1a. Lectures, readings, papers, and discussions. *Three hours a week.* Fall semester.

2a. Money and Banking.—An introductory course to the study of money, banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and

workings of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take course 2b. Open to others by special permission. Text-book and lectures. *Two hours a week.* Spring semester.

2b. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. Open to all who have taken or are taking course 1a, to others only by special permission. *Three hours a week.* Spring semester.

3a. Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the state and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. General sociological theory will occupy the last weeks of the semester. This course is open to those who have taken course 1a, and to others only by special permission. Students planning to take this course are advised to take course 3b the preceding year, although it would be possible to take both courses in the same year. Lectures, readings, and discussions. *Three hours a week.* Fall semester.

3b. Anthropology.—The evolutionary origin and history of man; characteristics of primitive man; departure from the animal status and beginnings of civilization; development of industries, arts, and sciences; growth of language, warfare, migrations, and social institutions. Open to all students. Students planning to specialize in economics are advised to take this course before taking course 3a. Text-book and lectures. *Two hours a week.* Given in the fall term of even years.

4a. Social Reforms.—Socialism, communism, and communistic settlements, anarchy, nihilism, European systems of workingmen's insurance, trade union, relief associations, and other efforts providing against old age and misfortune. Lectures and readings. Open to those who have taken course 3a and to others by special permission. *Three hours a week.* Spring semester.

4b. Ethnology.—Principles underlying racial distinctions. The origin and characteristics of races or general ethnic groups. The great migrations and changes worked by new environments and conflicts. Modern

racial problems in America, Europe, and Asia. Open to those who have taken courses 3a or 3b. Lectures, readings, and discussions. *Two hours a week.* Given in the spring semester of odd years.

5. International Law.—The principles, history, and prominent "cases" of international law take up most of the course. Considerable attention will be given to American diplomacy and the most important foreign treaties. Text-book, lectures, and discussions. *Two hours a week.* Fall semester of odd years.

6. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week.* Spring semester.

7a. Governments of Europe.—A brief review of the ancient types of government followed by a detailed comparative study of modern European national governments. Political parties and current national problems will receive some attention. Lecture course with readings. *Two hours a week.* Fall semester.

7b. Municipal Government.—A study of the systems of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. Lectures and readings. *One hour a week.* Given in the fall semester of even years.

8. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. Lectures and readings. *Two hours a week.* Spring semester.

9. Democracy, Its History and Institutions.—The class will study the beginnings and development or early forms of Democracy and trace the great world movement down through the ages to the present. The greater part of the time will be given to a study of the current democratic movements in Europe, Australasia, and the American States. Lectures and readings. *Two hours a week.* Given in the spring semester of even years.

10. Economic History.—The leading facts of the economic history of Europe and America, introducing the student to the fundamental causes which lie behind much of narrative history, and examining the material and industrial resources which make the wealth of nations. Lectures and readings. Open to all students. Recommended for students planning to take other economics courses. *Two hours a week.* Given in the fall semester of odd years.

EDUCATION

Professor Davidson

1. History of Education.—From the Greeks to Rousseau. Ideals of education at each stage of development; their sources, and modification through the intellectual life and convictions of the people; organization of instruction and the results obtained. *Three hours a week.* Fall semester.

2. History of Education.—Course 1 continued,—the development of education traced down to the present time. *Three hours a week.* Spring semester.

3. Organization and Administration.—Growth of present conceptions of education in the United States; organization of education in the different states; also in Germany, France, and England; comparative study of education in three typical states—Massachusetts, New York, and California—and special study of the school system of Maine. *Three hours a week.* Fall semester.

4. Organization and Administration Continued.—Problems within the state; town schools and city schools; duties of all officers; certification; of teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.* Spring semester.

5. Foundations of Education.—Avenues through which knowledge reaches the child and methods of effective approach. Training in analysis, synthesis, and reasoning; inculcation of habits of attention, discrimination, judgment; methods of imparting instruction by topical recitation, question, and exposition; the use of examination, note-book, library, and laboratory methods. *Three hours a week.* Fall semester.

6. Special Methodology.—All high school teachers, principals, and superintendents should be specialists in some high school subject. After conference with his major instructor, a course of study, reading, and practice will be mapped out for each student, in the methods most applicable in his specialty. *Three hours a week.* Spring semester. Open to those only who have taken Course 5.

8. Child Study.—The physical child. Order of development of the mental powers; adolescence; adaptation of studies to the child. *Two hours a week.* Spring semester. Open to those only who have taken Course 5.

9. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory in our public schools. Among the problems that students investigate are:

1. The introduction of motor activities in the first four grades.
2. The value of percentage grading in estimating acquired power and knowledge in the higher grades.
3. The causes that lead pupils to leave school at or before the completion of the work of the grammar grades.
4. The value of repeating the year when pupils of the grammar grades fail of promotion, etc. *Two hours a week.* Fall semester.

Summer Term (Professor Davidson; Professor Scudder)

The following courses are offered for election; the three elected by the greatest number of students will be given:

1. Organization and Administration.—Studies in school law. Comparative studies of school organization in Maine, in other states, and in Germany, France, and England. School administration.

2. Foundations of Education.—Studies in the nervous and mental organization of man with special reference to his capacity for education. The central nervous system, the brain, and the special senses will be studied with reference to their functions and contributions to education. Speech and the higher mental processes will be considered to establish a scientific procedure in instruction.

3. Child Study.—Studies of the child from birth to maturity. The physical child. The order of development of the mental powers; adolescence; adaptation of studies to the child.

Note.—Either No. 2 or No. 3 will be given, but not both, unless the registration for each is above ten.

4. English Grammar.—In this course special study will be given to those constructions in prose text that are omitted in the handbooks of grammar. The course will also include a discussion of the different parts of speech and of the syntactic relations, to discover principles of classification where grammars disagree. The functions of prepositions, the relations expressed by infinitives and noun clauses, with their analogs in noun and phrase constructions will be examined, and also the genesis of noun and adverbial clauses. Advanced works for reference will be provided, but all should bring for purposes of comparison such handbooks of grammar as they possess.

5. A Businesslike Administration of a School System.—15 lectures.

6. Manual Training in the Elementary School.—Lectures and laboratory. This course will require a double afternoon period. The wood-working equipment of the Department of Mechanical Engineering will supply all needs for the wood-working section. These students will be shown how to introduce and conduct wood-working in the seventh to ninth grades. The elements of basketry, weaving, etc., as taught in the lower grades and the methods of conducting such work will be given for teachers and superintendents of lower grade work.

7. Social Activities of School Life.—This course will include student government, fraternities, play grounds, athletics, social culture, social service ideals, etc.

8. Methods in Teaching English in Grammar Grades and High School.—Chubb's "The Teaching of English," The Macmillan Company, is recommended for parallel reading.

ENGLISH

Professor Gray; Professor Thompson; Professor Daggett; Assistant Professor Weaver; Mr. Prince; Mr. Pearson

Two credits in English are required for graduation. Courses 3 and 4 which are prescribed for freshmen, give 1 1-5 credits. The remaining 4-5 credits are regularly obtained by taking courses 1a and 1b, 2a and 2b, or 2c and 2d.

Courses in this department should be taken in the following order:

First year: Courses 3, 4, 1a and 1b, 8.

Second year: Courses 2a and 2b, or 2c and 2d, 6, 7, perhaps 5a and 5b, 8, 20, 21.

Third year: Courses 13, 5a and 5b, 18a and 18b, 10a and 10b, 11a and 11b, 15, 20, 21, 19a and 19b, 12a and 12b.

Fourth year: Courses 10a and 10b, 12a and 12b, 13, 9a and 9b, perhaps 23, 24, 25.

Students are expected to consult the head of the department, if they find it necessary to make a change.

Courses in Composition

3. English Composition and Rhetoric.—The object of this course is to give training in writing correct and clear English. One composition written outside of class and about three themes written in class are required each week. The theoretical work consists in the study of the fundamental principles of good usage in English writing; and of the narrative and descriptive forms of composition. In illustration of the theory many selections from literature are studied. This course is prescribed for freshmen. Each section is limited to twenty students. *Three hours a week.* Fall semester.

4. English Composition and Rhetoric.—The object of this course is the same as in course 3. The theoretical work consists in a study of the more elementary principles of exposition and argumentation. Practice in making outlines and briefs; themes and fortnightly essays. This course is prescribed for freshmen. Each section is limited to twenty students. *Three hours a week.* Spring semester.

2a and 2b. Expository Composition.—A lecture course of one hour on the theory of exposition. A second hour is devoted to writing in order to cultivate facility; monthly essays and conferences. Required of sophomores. *Two hours a week.* Fall and spring semesters.

2c and 2d. Argumentative Composition.—A lecture course of one hour on the theory of argumentation. A second hour is devoted to making briefs and writing short arguments in order to cultivate logical methods and facility; monthly essays, and conferences. Required of sophomores. *Two hours a week.* Fall and spring semesters.

Sophomores are required to register for either 2a and 2b, or 2c and 2d. These courses may not be postponed until the junior or senior year, without permission of the head of the department. English 3 and 4 are pre-requisites.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the

course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Pre-requisites: English 3, 4, 2a, and 2b, or 2c and 2d, and 8. *Two hours a week.* Fall semester.

[Omitted 1910-1911.]

Courses in Public Speaking

1a and 1b. PUBLIC SPEAKING.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first term consists in voice training by means of practice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second term the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. During the year the sections will meet *once a week.* The assignment of sections is made by the instructor in the second week of the semester.

18a and 18b. DEBATING.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading questions of the day debated. *Two hours a week.* Pre-requisites 1a and 1b, 3, and 4.

22a. ORAL ENGLISH.—A fundamental course in voice production, diction, and interpretation of literature. *Three hours a week.* Fall semester.

22b. ORAL ENGLISH.—Advanced course in the interpretation of literature, devoted especially to Browning and the dramatic monolog. *Two hours a week.* Spring semester.

23a. PUBLIC SPEAKING.—Forms of address. A study of persuasion applied to speeches, letters, and editorials for various occasions. Analysis of speeches and preparation of original work. *Two hours a week.* Fall semester.

23b. Public Speaking.—A complementary course to 23a, devoted entirely to extemporaneous speaking. *Three hours a week.* Spring semester.

Courses in Language and Literature

5a. Old English (Anglo Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German. Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Fall semester.

5b. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary and archæological interests. *Three hours a week.* Spring semester. Pre-requisite 5a.

6. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall semester.

7. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring semester.

8a. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the freshman or sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.* Fall semester.

8b. History of English Literature.—A continuation of 8a, covering the periods from the seventeenth century to the present day. *Three hours a week.* Spring semester.

9a. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader.

Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Fall semester. Pre-requisite 5a.

9b. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical, and literary interests. *Three hours a week.* Spring semester.

10a. Shakspere and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakspere, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakspere, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Fall semester.

10b. Shakspere.—A detailed study of three or four of the great tragedies of Shakspere. *Two hours a week.* Fall semester.

11a. American Literature.—A lecture course giving a historical outline, with assigned reading. *Two hours a week.* Fall semester. Prerequisite 8a and 8b.

11b. American Literature.—A continuation of 11a. *Two hours a week.* Spring semester.

12a. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.* Fall semester.

12b. The Novel.—A continuation of 12a. *Two hours a week.* Spring semester.

15. Victorian Poets.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in these poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.* Fall semester.

19a. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Fall semester.

19b. Elizabethan Poetry and Prose.—A continuation of course 19a. The study of Elizabethan poetry will be completed, and the larger part

of the semester given to the study of the prose of the period. *Two hours a week.* Spring semester.

20. English Romantic Poets.—A general view of the English Romantic Movement with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thomson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Fall semester.

21. English Romantic Poets.—A continuation of course 20. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Spring semester.

Courses Primarily for Graduates

5a and 5b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates.

22. Cynewulf.—Reading of The Christ, and The Elene; and possibly some of the poems attributed to Cynewulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Pre-requisites, 5a and 5b. *Three hours a week.* Fall semester.

9a. and 9b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates. Pre-requisites, 5a and 5b.

23. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.* Fall and spring semesters.

24. The Victorian Period (1830-1900).—A study of the literary, social, and scientific movements in England and America, the rise of periodical literature, tractarianism, Pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thrackery, George Eliot, Jane Austin and the Brontës. *Two hours a week.* Fall and spring semesters.

25. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, drama, and the English metres. *One hour a week.* Spring semester.

30. Literary Seminary.—Research courses: 1. Shakspere; 2. History and theory of literary criticism; 3. Wordsworth; 4. The epic as a literary form. *One hour a week.* Fall and spring semesters.

Summer Term

1. A course in preparatory English for the benefit of students who have entrance credits to make in this department.

2. English Composition and Rhetoric.—The work in this course is similar to that of the fall term of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-book used will be Espenshade's Composition and Rhetoric.

3. English Prose.—A study of the style and substance of selected writings from the works of English prose writers of the Nineteenth Century. Among the writers dealt with will be Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. There will be frequent written reports on the reading assigned, the purpose of the reports being to give practice in writing and to encourage the student toward intelligent interpretation and appreciation of what he reads.

4. English Poetry.—A careful and appreciative study of selected poems from the writings of English poets of the early part of the Nineteenth Century. Among the writers dealt with will be Wordsworth, Coleridge, Byron, Shelley, and Keats. An attempt will be made to determine the characteristic merits of the poets studied and to show the relation of these poets to the time in which they lived. Courses 3 and 4 will be given in alternate years. Students in English are requested to indicate their preference for 1910.

An additional course in Shakspere (a careful reading of a few of the best plays) will be given, if there is sufficient demand.

GERMAN

Professor Thompson; Mr. Drummond

1 and 2. First Year German.—A course for beginners. Joynes Wesselbadt German Lesson Grammar; composition; numerous texts read; conversation. *Five hours a week* throughout the year.

3a, 3b. Second Year German.—A course for students who have had courses 1, 2 or equivalent. The grammar study, composition had text reading are progressively advanced from courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

4a, 4b. Third Year German.—A course for students who have had courses 1 and 2 and 3a, 3b or equivalent. Texts include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week* throughout the year.

5a, 5b. Fourth Year German.—An advanced course for students who have had courses 1, 2, 3a, 3b and 4a, 4b or eqiuvalent. Texts include 19th century literature; advanced composition with original themes; lectures on history of German literature completed. *Three hours a week* throughout the year.

These courses are carefully graded in difficulty and are to be taken in the order named.

For the convenience of engineering students and those who cannot take courses 1 and 2 (five hours a week) the following two courses are offered in which the work of courses 1 and 2 can be completed in two years.

1a, 1b. Elementary German.—Study of grammar, composition and easy texts which contain a practical vocabulary. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

2a, 2b. Continuation of Course 1a, 1b.—More advanced study of grammar, composition and texts. Open to students who have completed courses 1a, 1b or equivalent. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

Note.—Course 2a, 2b is not equivalent for course 3a, 3b.

6a, 6b. German Conversation.—*Two hours a week* throughout the year.

7a, 7b. Faust.—Reading of Faust (first part); selection from second part; study of Faust literature; lectures on the origin and development of the Faust idea. *Two hours a week* throughout the year.

8a, 8b. History of German Literature.—Lectures with assigned readings. *One hour a week* throughout the year.

9a, 9b. History of the German Novel.—Lectures given in even years. *Two hours a week* throughout the year.

10a, 10b. History of the German Drama.—Lectures given in odd years. *Two hours a week* throughout the year.

11a, 11b. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week* throughout the year.

12a, 12b. History of German Education.—Lectures. *One hour a week* throughout the year.

13a, 13b. Old High German.—Wright's Old High German Primer; Braune's Althochdeulzches Lesebuch. Open to graduates and those whose major is German. *Two hours a week* throughout the year.

14. Gothic.—Conditions for electing this course are the same as for course 13a, 13b. Wright's Gothic Primer. *Two hours a week.* Fall semester.

15. Middle High German.—The conditions for electing this course are the same as for course 12 and 13. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.* Spring semester.

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

GREEK AND CLASSICAL ARCHAEOLOGY

Professor Huddilston

The department of Greek is arranged with the idea of presenting to the student an opportunity of becoming acquainted with several phases of Hellenic civilization and such courses are offered as will prove serviceable not only to those pursuing the classical languages but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college course some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

Courses 1-10 cover the field of Greek language in its several periods of poetry and prose and assume the usual preparatory work in Greek.

1. Xenophon.—Hellenica, Books, I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall semester.

2. Homer.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring semester.

3. Attic Orators.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall semester.

4. Greek Tragedy.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring semester.

5. Thucydides.—Books II-III. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Three hours a week.* Fall semester. Open to students who have taken courses 1 and 3.

6. Aristophanes.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. Open to students who have taken courses 2 and 4. *Two hours a week.* Spring semester.

7. Plato.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. Open to students who have taken courses 3 and 5. *Two hours a week.* Fall semester.

8. Pindar.—The Olympian and Pythian Odes; supplementary reading on the history of Greek lyric poetry. *Two hours a week.* Spring semester.

9. Greek Prose Composition.—A course in writing Greek, intended to continue the work begun in course 1. *One hour a week.* Spring semester.

10. Greek Prose Composition.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall semester.

Courses 11-17 offer an introduction to the literature, religion, customs, art and history, and are adapted to the needs of students who may wish to devote only a year or two to Greek subjects.

11. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of Greek based on the text. *Five hours a week.* Fall semester.

12. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose selections from Homer's Iliad. *Five hours a week.* Spring semester.

13. Greek Private Life.—Lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.* Given in the fall semester.

14. Greek Religion.—A study of the chief divinities in ancient Greek religion. Lectures and assigned reading. Investigation of special topics by members of the class. *Two hours a week.* Given in the spring semester.

15. Greek Literature.—A general survey of the rise and development of the literature of ancient Greece with special emphasis upon the literary standards established by the Greeks; assigned readings in translation and investigation of special topics supplemented by lectures. *Three hours a week.* Fall semester of odd years.

16. Greek History.—A brief survey of the Pre-Greek nations with reference to their legacies to civilization, followed by the history of Greece from the earliest times down to the absorption of Greece by Rome. The development of political ideals, and the forces that were basal in Greek civic life and government will be kept to the front. Oman's History of Greece will be used, accompanied by collateral reading and lectures. Open to all students. *Three hours per week.* Fall semester of even years.

17. Greek Fine Arts.—The entire question, so far as time allows, of the development of art among the ancient Greeks will be discussed in lectures illustrated by the use of the stereopticon and photographs. Greek sculpture as representing the largest part of the extant remains of ancient art will receive the most attention; but the survey will include architecture, and painting, and the minor art of pottery. The

aim of the course will be to present a definite notion of the part that art played in the intellectual life of the Greeks and the significance of this legacy to succeeding ages. *Three hours a week.* Spring semester.

18. History of Old Testament Literature.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Old and New Testament Canons will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Fall semester. Not given in 1910-11.

19. History of New Testament Literature.—A continuation of course 18. Open to all students. *One hour a week.* Spring semester. Not given in 1910-11.

The following courses in the history of art bearing chiefly upon the influence of classical ideals in the Italian Renaissance are given at present as under the department of Greek:

1. Art.—The revival of the fine arts in Italy, with special reference to the history of painting in Tuscany and Umbria during the early Renaissance. Lectures and collateral reading. The work is illustrated by a large and growing collection of photographs and casts. *One hour a week.* Fall semester of even years.

2. Art.—A continuation of course 1, dealing chiefly with the masters of the high Renaissance in Florence and Rome. *One hour a week.* Spring semester of odd years.

3. Art.—Painting in the north of Italy, and the culmination of the Italian Renaissance in the Venetian masters. Lectures and collateral reading. *One hour a week.* Fall semester of odd years.

4. Art.—A continuation of course 3. *One hour a week.* Spring semester of even years.

5. Architecture.—A chronological survey of the development of ancient and modern architecture down to 1600 A. D. Greek and Roman architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures,

outside reading, and detailed study of the reproduction in the Art Collection. Open to all students. *Two hours per week* for the year. Given in 1910-11.

6. Architecture.—A continuation of course 5. *Two hours a week.* Spring semester. Given in 1910-11.

HISTORY

Professor Fellows; Professor Colvin

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesiastical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Open to all students. *Three hours a week.* Fall semester.

2. Modern History.—Continuation of course 1 to the present time. A rapid survey of the Reformation; the absolute monarchy in France; the French Revolution; the Napoleonic era; Europe in the nineteenth century. Open to all students. *Three hours a week.* Spring semester.

Courses 1 and 2 will be given in 1910-11.

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Open to all students. *Three hours a week.* Fall semester.

4. History of England.—Continuation of course 3. From the beginning of the Stuart period to the present. Open to all students. *Three hours a week.* Spring semester.

Courses 3 and 4 are given in 1909-10.

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.* Fall semester.

6. History of the United States.—The period from 1783 to the beginning of Jackson's administration. This course will begin with a brief study of Colonial history from 1750. Open to all students. *Three hours a week.* Fall semester.

7. History of the United States.—A continuation of course 6, through the Period of Reconstruction. Open to all students. *Three hours a week.* Spring semester.

8. Industrial and Social History of England.—The medieval manor, town, guild, and foreign trade; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. *Two hours a week.*

[The following courses are open only to advanced students.]

9. The Renaissance and the Reformation.—The period from 1300 to 1648 A. D. *Two hours a week.*

10. The Renaissance and the Reformation.—A continuation of course 8. *Two hours a week.*

11. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

12. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

13. Modern Continental Europe.—The period since 1815. *Three hours a week.*

14. Historical Construction and Criticism.—*One hour a week.*

Greek History and Roman History are given in the departments of Greek and Latin.

Summer Term (Professor Sprague)

1. United States History. Critical periods and formative forces from the Revolution to the Civil War.

2. Modern Europe. The economic and other forces producing the civilization of Europe in modern times will be given much attention.

3. English History. A course in English History will be offered, the details of which will be arranged according to the demand after the opening of the term.

4. Social Problems and Reforms. The course will be devoted to a study of the family, its history, and problems; divorce; criminality; poverty and its relief; socialism; anarchy; workingmen's insurance, and other reforms, as far as time permits.

LATIN

Professor Chase

Courses in Latin 1, 2, fulfill the classical requirements for the B. A. degree.

1. Livy and Composition.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four times a week.* Fall semester.

2. Cicero and Horace.—Cicero, De Senectute; Horace, Odes and Epodes; Latin composition. *Four times a week.* Spring semester.

Courses 1 and 2 are required of candidates for the B. A. degree who elect Latin.

3. Terence and Plautus.—The Andria, Adelphoe, or Phormio of Terence; the Captivi, Trinummus, or Menaechmi of Plautus; lectures on the development of Roman comedy. *Three times a week.* Fall semester.

4. Tacitus and Cicero.—The Agricola and Germania of Tacitus; selected letters of Cicero. *Three hours a week.* Spring semester.

5. Latin Composition.—Practice in writing Latin; study of Latin syntax. *One hour a week.* Fall semester.

6. Latin Composition.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.* Spring semester.

7. Pliny and Tacitus.—Selected letters of Pliny the Younger; readings in the Annals of Tacitus; the Roman Empire. *Two hours a week.* Given in the fall semester of even years.

8. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; lectures on the elegiac poets. *Two hours a week.* Given in the spring semester of odd years.

The following may be counted toward the Master's degree.

9. Roman Satire.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius. Open to students who have taken, or are taking courses 3-4, or 7-8. *Two hours a week.* Given in the fall semester of odd years.

10. Roman Satire.—A continuation of course 9. *Two hours a week.* Given in the spring semester of even years.

11. Roman Philosophy.—Cicero (selections from the Academica, De Officiis, Tusculanæ Disputationes, De Finibus, De Natura Deorum); lectures on the history and development of ancient philosophy. Open to

students who have taken, or are taking, courses 3-4 or 7-8. *Two hours a week.* Given in the fall semester of even years.

12. Roman Philosophy.—A continuation of course 11. *Two hours a week.* Given in the spring semester of odd years.

13. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken courses 1-4. *Three hours a week.* Given in the fall semester of even years.

14. Roman Literature.—A continuation of course 13. *Three hours a week.* Given in the spring semester of odd years.

15. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken courses 1-4. *Two hours a week.* Given in the fall semester of odd years.

16. Roman Rhetoric and Oratory.—A continuation of course 15. *Two hours a week.* Given in the spring semester of even years.

18. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken courses 1-4. *One hour a week.* Given in the fall semester of odd years.

19a. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages. Latin Phonetics. The developmentt of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in the fall semseter of odd years.

19b. The Latin Language.—A continuation of 19a. *One hour a week.* Given in the spring semester of even years.

20. Roman Epigraphy.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring semester of even years.

21. Rapid Reading of Latin.—Practice in reading without translation. Selections from various authors. Especially adapted for students expecting to teach the language. Open only to students whose major subject is Latin. *One hour a week.* Spring semester.

22. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

23. Sanskrit.—A continuation of course 22, with more attention to the classical literature of India. *Two hours a week.*

24. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archaeology, etc. *One hour a week.* Given in the fall semester of even years.

25. Roman History.—The development of Rome to the time of Augustus. Lectures, reading, and recitations. *Three hours a week.* Given in the fall semester of odd years.

26. Roman History.—The Roman Empire. A continuation of course 25. *Three times a week.* Given in the spring semester of even years.

Summer Term

The Latin Department offers two distinctly different lines of study, intended to meet the needs of three classes of students.

1. For Teachers of Latin, and for Students wishing to gain Entrance Credits in Latin. One course is offered in Virgil and one in Cæsar's Gallic War. In these two courses various questions connected with the teaching of Latin will be discussed, such as questions of spelling and pronunciation, of grammatical forms and inflections, of syntax, prosody, etc.; also questions of bibliography, methods of translation, history, mythology, literature, and the various aids to the elucidation of the authors studied, together with the fundamental principles of the Latin language.

2. For Students who desire College Credits looking to the B .A. Degree. It is the plan of the department to offer a double course that shall cover the work of an entire college semester and be equivalent to that required for one college credit, and to vary this course from year to year so that a student in a few summers may complete a fairly comprehensive course of college study in Latin. For the summer of

1909 it is proposed to offer a course in Cicero, *De Senectute*, and Horace, Odes and Epodes, or a course in Pliny and Tacitus. The decision will rest with the class. This will be equivalent to the work offered for the second semester of the freshman year. We call the especial attention of secondary school teachers who have not had the advantage of complete college training in Latin to these courses, as we believe they afford an unusual opportunity to them to increase their equipment.

MATHEMATICS AND ASTRONOMY

Professor Hart; *Professor Willard; Mr. Reed; Mr. Chambers; Mr. Hamlin; Mr. Wilbur

Students electing Mathematics as a major subject should expect to take courses 1, 2, 4, 6, 7, 8, 11, 12, 13, 15, 19, 20, 21 and either courses 9 and 10 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

1. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book in Bush and Clarke's Solid Geometry. *Five hours a week for ten weeks.* Spring semester. Open to all freshmen who did not offer it for admission.

2. Algebra.—A brief review of the theory of exponents, quadratic equations, and the binomial theorem; indetermminate equations; logarithms, including practice in the solution of numerical exercises; undetermined coefficients; partial fractions; exponential and logarithmic series, and the computation of logarithms; permutations and combinations; theory of equations. The text-book is Hawke's Advanced Algebra. *Five hours a week.* Fall semester, last six weeks; spring semester, first eight weeks.

4. Plane Trigonometry.—The text-book is Taylor's Trigonometry. *Five hours a week.* Fall semester, first twelve weeks.

6a. Analytic Geometry.—A study of the point, line, and circle. Open to students who have taken courses 1, 2 and 4. The text-book is Smith and Gale's Introduction to Analytic Geometry. *Five hours a week.* Spring semester, last ten weeks.

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*Absent on leave 1908-09.

6b. Analytic Geometry.—A continuation of course 6a. Conic sections; elements of solid analytic geometry. *Five hours a week.* Fall semester, first eight weeks.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken courses 1, 2, 4, 6a, and 6b. The text-book is Granville's Differential and Integral Calculus. *Five hours a week.* Fall semester, last ten weeks.

8. Calculus.—A continuation of course 7. Integration of the elementary forms; integration between limits; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring semester.

9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects and work in the observatory. Open to students who have taken courses 1, 2, 4, and, preferably, Physics 1 and Physics 5. The text-book is Young's Manual of Astronomy. *Three hours a week.* Spring semester.

10. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the student's own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, and vertical circle. Open to students who have taken courses 9, 4, and 19. *Two hours of recitations or lectures and two hours of observatory work a week.* Fall semester.

11. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken courses 1, 2 and 4. *Three hours a week.* Spring semester.

12. Advanced Integral Calculus.—A course based upon Byerly's Integral Calculus. Open to students who have taken courses 6, 7 and 8. *Three hours a week.* Given in the fall semester of odd years.

13. Advanced Integral Calculus.—A continuation of course 12. *Two hours a week.* Given in the spring semester of even years.

15. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken courses 7 and 8. *Two hours a week.* Given in the spring semester of odd years.

16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students who have taken courses 6, 7, 8, 9, 19, and, preferably, 10. *Three hours a week.* Given in the fall semester of odd years.

17. Practical Astronomy.—A continuation of course 16. *Three hours a week.* Given in the spring semester of even years.

19. Spherical Trigonometry.—A continuation of course 4, with additional problems and applications to spherical astronomy. *Two hours a week.* Fall semester.

20a. Advanced Analytic Geometry.—A course for students who have completed courses 6, 7, 8 and 11. *Three hours a week.* Given in the fall semester of even years.

20b. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in the spring semester of odd years.

21a. History of Mathematics.—Lectures and recitations. *One hour a week.* Given in the fall semester of even years.

21b. History of Mathematics.—A continuation of course 21a. Given in the spring semester of odd years.

22a. Analytic Geometry and Calculus.—A course given for students in Chemistry and for those in the B. A. courses who desire only a brief course in these subjects. *Two hours a week.* Given in the fall semester of even years.

22b. A continuation of course 22a. *Two hours a week spring semester.* Given in the spring semester of odd years.

Summer Term

1. High School Algebra. A course intended for teachers in preparatory schools and covering the second year's work. Especial attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college

work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are also advised to take this course.

2. Plane Geometry.—A review of the more important theorems with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools and for candidates for admission who are slightly deficient in geometry.

3. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Bush and Clarke's Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Well's, and other books will be used for reference.

4. Plane Trigonometry.—The solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which will be useful for reference.

5. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. Text-book to be selected at the opening of the term.

6. Analytic Geometry.—A brief course covering the elements of this subject.

7. Differential and Integral Calculus.—A course intended for teachers in preparatory schools who wish to gain a knowledge of the elements of this subject.

8. Descriptive Astronomy.—Lectures accompanied by work in the observatory.

Note.—Five of the above courses will be given, to be determined by the number of students selecting them.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 177.

PHILOSOPHY

Professor Craig

Students intending to major in this department should begin with courses 1 and 10. Those wishing only a minor amount of work in philosophy may begin with any course except 2, 8 or 9.

Philosophy 6 may be counted as three hours toward the ten hours in classics required of all candidates for the B. A. degree.

1. Elementary Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and elementary psychology, especially that of sensation, perception, instinct, habit and memory. The methods used are recitation, discussion, introspection (self-observation), observation of others, experiment and demonstration. Students electing this course are advised to precede or accompany it with biology 1; or if this be impossible, to read some up-to-date book on evolution and a similar work on human physiology. The text-book is Judd's Psychology General Introduction. *Three hours a week.* Fall semester.

2. Psychology.—A continuation of course 1, dealing especially with the higher psychic functions, such as imagination, conception, emotion and will. The text-books will be that of course 1 and also James's Psychology (Briefer Course). *Three hours a week.* Spring semester.

3. Ethics.—The object of this course is to bring the student to do serious thinking on the question of the fundamental bases of morality, a subject on which every college man ought to have an intelligent opinion. The text-book is Dewey and Tufts' Ethics. *Two hours a week.* Fall semester.

4. Social Psychology.—The psychology of the crowd, the mob, the public, and the deliberative assembly; of fashion, convention, and custom; of social influence and social control. Two text-books may be used, Ross's Social Psychology and the same author's Social Control. *Two hours a week.* Spring semester.

5. Logic.—A course especially for three classes of students: namely, (1) Students of science, either pure science or applied; (2) Students of economics, or those preparing for law; (3) Students interested in debating. The object of the course is practical. It is to aid the student to reason correctly and also to aid him in criticizing his own or another's reasoning. *Two hours a week.* Fall and Spring semesters. Credit will be given for the Fall semester alone if so desired.

6. History of Ancient Philosophy.—Designed to give an insight into Greek and Roman thought as related to the life of the Greeks and Romans, and also to lay the foundation for a study of modern thought, since all modern philosophy has grown from the beginnings made by the Greeks. Rogers's A Student's History of Philosophy is used as a text-book. Extensive selections from Plato and from Aristotle are read and discussed. *Three hours a week.* Fall semester of even years.

7. History of Modern Philosophy.—Continuation of the preceding course, but may be taken separately, having different interests, connected with modern history and modern thought in literature, science, art and politics. Text-book as in the preceding course. Readings from Descartes, Locke, Berkeley, Hume, Kant and other modern classical philosophers. *Three hours a week.* Spring semester of odd years.

8. Seminar.—Reviews of recent literature, both philosophical and psychological. The student may select literature on a topic in which he is specially interested. The work may be continued a number of semesters. *One hour a week.* Fall or spring semester.

9. Research.—Primarily for graduate students. *The number of hours* a week is not fixed, but must be arranged at the time of registration. Fall or spring semester.

10. Evolution.—An elementary presentation of evolution in all its phases, cosmic, geologic, organic, psychic, and social. The bearing of evolution upon ultimate philosophic problems is taken up in the following course (11). *Two hours a week.* Fall semester.

11. Introduction to Philosophy.—The relation of science to philosophy and to religion. Discussion of materialism and idealism, mechanism and teleology, the nature of knowledge, and other fundamental problems. A text-book will be used. *Two hours a week.* Spring semester.

PHYSICAL TRAINING

The courses in this department are described on page 178.

PHYSICS

Professor Stevens; Professor Woodman; Mr. Scott; Mr. Drew

[Note.—For students who are specializing in this department the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.]

1. General Physics.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 4. *Five hours a week.* Fall semester.

2. General Physics.—A continuation of course 1; heat and electricity. *Three hours a week.* Spring semester.

3. Qualitative Laboratory Work.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in courses 1 and 2. **Five hours a week.* Fall semester.

5. Laboratory Physics.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either course 1 or course 12. **Five hours a week.* Spring semester.

7. Optics.—Lectures in continuation of course 1, based chiefly upon Preston's Light and Drude's Optics. Open to students who have taken Mathematics 8. *Three hours a week.* Spring semester.

8. Theory of Electricity and Magnetism.—Lectures and recitations on the mathematical theory of potential, capacity, and inductance, with applications to direct current phenomena. Hadley's Magnetism and Electricity for Students is used as a text-book. *Three hours a week.* Fall semester.

9. Mechanics and Heat.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week, or five hours a week.* Fall semester.

10. Optics.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week, or five hours a week.* Spring semester.

11. Electrical Measurements.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week.* Fall semester.

12. General Physics.—A course covering the ground of course 1, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Aldous's Physics. *Five hours a week.* Fall semester.

13. Theory of Electricity and Magnetism.—Continuation of course 8, with applications to alternating current phenomena. *Three hours a week.* Spring semester.

14. Theory of Electrical Measurements.—Lectures and recitations on the mathematical theory of electrical instruments and measurements. Especial attention is given to a discussion of the ordinary laboratory methods of measuring resistance, potential, current, capacity, and inductance. *Two hours a week.* Fall semester of even years.

15. Special Laboratory Course.—A course open to students who have completed courses 9, 10, and 11. A subject is assigned for original investigation, or the work of a published research is repeated. **Five hours a week.* Fall semester.

16. Special Laboratory Course.—A continuation of course 15. **Seven and one-half hours a week.* Spring semester.

18. Electricity and Optics.—Advanced laboratory work in continuation of course 5. **Five hours a week. Fall semester.*

19. Least Squares.—A course of lectures covering the more important topics treated in this subject. Required of juniors in civil engineering and elective for others who have taken Physics 1 and 2 and Mathematics 8. *One hour a week.* Fall semester.

Summer Term

1. An elementary laboratory course.—This includes the list of experiments adopted by the Maine colleges for admission in physics.

2. Advanced course.—Work in any laboratory course offered in the University may be taken by students in the summer term who are properly qualified.

3. A series of experimental lectures on general physics.—The grade of the work in this course will be determined by the preparation of the students electing it.

ROMANCE LANGUAGES

Professor Segall; Professor Raggio

French

1. Elementary French.—Fraser and Squair's Grammar. Syms' Reader. *Five hours a week.* Fall semester.

2. Elementary French.—A continuation of course 1. Fraser and Squair's Grammar; Verne, Une Ville flottante; Muller, Les Grandes découvertes. Collateral reading: Dumas, Les Trois mousquetaires. *Five hours a week.* Spring semester.

3a. French Prose.—Bruce, Grammaire française; Lamartine, Histoire des Girondins (selections); France, Livre de mon ami. Collateral reading: Bruno, Le Tour de la France; Lacombe, Petite histoire du peuple français. Open to students who have taken courses 1 and 2 or an equivalent. *Three hours a week.* Fall semester.

3b. French Prose.—A continuation of course 3a. Bruce, Grammaire française; Sand, La Mare au diable; Hugo, Quatre-vingt-treize. Collateral reading: Michelet, France et Français; Laurie, Une Année de collège à Paris. *Two hours a week.* Spring semester.

4a. Advanced French Prose.—Anatole France, Le Crime de Sylvestre Bonnard; composition. Collateral reading: Modern short stories. Open to students who have taken courses 3a and 3b, or an equivalent. *Three hours a week.* Fall semester.

4b. Advanced French Prose.—A continuation of course 4a. Contemporary story writers: D'Esparbès, Marin, Le Braz, Claretie, Coppée. Composition. Collateral reading. Rambaud, Petite histoire de la civilisation française. *Two hours a week.* Spring semester.

5a. Elementary French Composition and Conversation.—Open to students who have taken courses 1 and 2, or an equivalent. *Two hours a week.* Fall semester.

5b. Elementary French Composition and Conversation.—A continuation of course 5a. *Two hours a week.* Spring semester.

6b. An Introduction into the History of French Literature.—Pellissier, Histoire de la littérature française. Lectures, recitations, reports. Open to students who have taken courses 4a and 4b. *Three hours a week.* Fall semester.

6a. An Introduction into the History of French Literature.—A continuation of course 6a. Pellissier, Histoire de la littérature française. Lectures, recitations, reports. *Three hours a week.* Spring semester.

Spanish

9a. Elementary Spanish.—Hills and Ford, Grammar; Ramsey, Reader. *Three hours a week.* Fall semester.

9b. Elementary Spanish.—A continuation of course 9a. Hills and Ford, Grammar; Alarcón, El Capitán Veneno. *Two hours a week.* Spring semester.

10a. Modern Spanish Prose.—Alarcón; Galdós; Valera. Composition. Open to students who have taken courses 9a and 9b. *Three hours a week.* Fall semester.

10b. Modern Spanish Prose.—A continuation of course 10a. *Two hours a week.* Spring semester.

Summer Term

Professor Raggio; Mr. Raiche

1a. Elementary Course.*—This course is intended for beginners. The text-book used will be Fraser and Squair's *Abridged French Grammar* (D. C. Heath & Co.), pp. 1-73.

1b. Continuation of Course 1a.†—The text-books used will be Fraser and Squair's *Abridged French Grammar* (D. C. Heath & Co.), pp. 73-128; Rambeau's *French Reader* (Henry Holt & Co.).

1c. Continuation of Course 1b.†—The text-books used will be Fraser and Squair's *Abridged French Grammar* (D. C. Heath & Co.). pp. 337-344; Rambeau's *French Reader* (Henry Holt & Co.).

2. Intermediate Course.—This course is intended for those who have already the required number of points for Entrance French, and who wish a course in French that may be counted towards a bachelor's degree. The text-books used will be Augier and Sandeau's *Le Gendre de M. Poirier* (American Book Co.); France's *Le Livre de mon ami* (Henry Holt & Co.); Gasc's *Concise Dictionary of the French and English Languages* (Henry Holt & Co.), or Clifton & McLaughlin's *New Dictionary of the French and English Language* (Wm. R. Jenkins Co.). Students should bring with them their grammars.

3. Empirical French Phonetics.—This course is intended for teachers who wish to concentrate their efforts upon French pronunciation. Students will be made familiar with the alphabet of L'Association Phonétique Internationale. Lectures on phonetic subjects will be given, and each member of the class will be expected to read, memorize, and declaim passages written in phonetic script. The text-books used will

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* The requirements for Entrance French may be met by taking Courses 1a, 1b, and 1c in consecutive years.

† Students who already have two of the four points required for Entrance French may complete their requirements during one Summer Term by taking courses 1b and 1c.

be Matzke's *A Primer of French Pronunciation* (Henry Holt & Co.) and Passy and Rambeau's *Chrestomathie française* (Leipzig, B. G. Teubner or New York, Henry Holt & Co.).

4. Colloquial French.—The object of this course is to familiarize the student with the common words and things of daily life. The text-book used will be Alge, Ripmann, and Buell's *First French Book* (Newson & Co.).

COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

GEORGE EMORY FELLOWS, Ph. D., L. H. D., LL. D.
President of the University

VICTOR RAY GARDNER, M. S. A.
Acting Head and Assistant Professor of Horticulture

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry

JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy

FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science

GILMAN ARTHUR DREW, Ph. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, Ph. D.
Professor of Romance Languages

GORDON EDWIN TOWER, B. S., M. F. *Professor of Forestry*

PERCY ANDERSON CAMPBELL, M. S. A.
Professor of Animal Industry

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, Ph. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, Ph. D.
Professor of Germanic Languages

GUY ANDREW THOMPSON, M. A.
Professor of English Literature

WINDSOR PRATT DAGGETT, Ph. B.
Professor of Public Speaking

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

HAROLD BELL, M. S. A. *Professor of Agronomy*

MINTIN ASBURY CHRYSLER, Ph. D.
Associate Professor of Botany

CHARLES WILSON EASLEY, Ph. D.
Associate Professor of Chemistry

ANDREW PAUL RAGGIO, Ph. D.
Assistant Professor of Romance Languages

* HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
WILLIAM ARCHIBALD BROWN, B. S. A.
Assistant Professor of Animal Industry
ARCHER LEWIS GROVER, B. S.
Assistant Professor of Drawing
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
LAURA COMSTOCK *Assistant Professor of Domestic Science*
MELVIN ERNEST SHERWIN, M. S.
Assistant Professor of Agronomy
GEORGE EDWARD SIMMONS, M. S.
Assistant Professor of Agronomy
IN CHARGE OF AGRICULTURAL EXTENSION WORK
WALTER EVERETT PRINCE, M. A. *Instructor in English*
WILLIS FLYE WASHBURN, B. S. *Instructor in Chemistry*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
GEORGE EDWARD PEARSON, M. A. *Instructor in English*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
ROBERT RUTHERFORD DRUMMOND, B. S.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
BENJAMIN ENGLE KRAYBILL, PH. B.
Instructor in Industrial Chemistry
JAMES RENFREW DICE, B. S. *Instructor in Animal Industry*
WINTHA RUDOLPH PALMER, B. S. *Instructor in Horticulture*
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
TRUMAN LEIGH HAMLIN, M. A. *Instructor in Mathematics*
WALTER EDMUND WILBUR, B. S. *Instructor in Mathematics*
ALICE MIDDLETON BORING, A. M. *Instructor in Zoölogy*

* Absent on leave.

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agronomy, Animal Industry, Horticulture, Agricultural and Biological Chemistry, Veterinary Science and Bacteriology, Poultry Husbandry, Domestic Science, Forestry, and Extension Work. The aim of the College is to prepare young men to become farmers, teachers of agriculture and the allied sciences in the schools and colleges, investigators of agricultural subjects in the United States Department of Agriculture, experiment station workers, foresters, and practical men; and to prepare young women to become teachers of Domestic Science and Elementary Domes-

tic Art and to understand thoroughly the problems arising in the administration of the house-keeping of institutions or of a home. *Tuition is free excepting in the courses in Forestry and Domestic Science.* On entering either the four year or two year school course in Agriculture a student is required to fill out a practical experience blank. Those who have not had experience in the operations common to ordinary farms are required to make themselves proficient in such lines before graduation.

The courses of instruction are organized as follows:

1. The Regular Courses:
   - The four years' general course in Agronomy, Animal Industry, Horticulture, Poultry, Forestry, and Domestic Science
   - The four years' course for teachers in Elementary Agriculture.
   - The special courses in Agronomy, Animal Industry, Horticulture, Poultry Management, and Domestic Science
   - The two years' Teachers' Course in Domestic Science.
   - The one year Teachers' Course in Agriculture
   - The two year's School Course in Agriculture
   - The short winter courses in Agronomy, Animal Industry, Horticulture, and Poultry
   - Farmers' week
2. The Extension Courses:
   - The correspondence courses
   - The lecture courses
   - The demonstration work
   - The co-operative experiments

The College Courses

The college courses are designed for those who wish to follow agriculture, animal and dairy husbandry, horticulture, poultry husbandry, domestic science, chemistry relating to experiment station work, veterinary science and bacteriology, or forestry as a business, or who propose to become teachers or investigators in related sciences. The instruction is arranged with a view to emphasize fundamental principles and to give the student the largest amount of technical knowledge consistent therewith. To this end the theoretical instruction is associated with practical work and observation on the farm, the dairy, in the orchard and garden, poultry plant, the University woodlot, and in the various laboratories of the University; but time is not consumed in purely manual operations.

Certain studies are fundamental to all work in agricultural lines and these are included among the subjects required in the four year courses. After these fundamental subjects are completed, opportunity for election is given.

Students in agriculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. Those intending to take this course should elect a preparatory course in quantitative chemical analysis.

The following course, embracing 30 credits, is the required course for four years' agricultural students. It is recommended that the subjects be taken in the order stated in the course. The elective subjects are selected with the advice of the major instructor.

A course for those who intend to become teachers of elementary agriculture in the public schools is to be found following the regular course.

The Four Years' Course in Agronomy, Animal Industry, and Horticulture

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 1	2	Animal Industry 1	2
Agronomy 2, *3	1	Animal Industry 2, †2	1
Biology 1	5	Botany 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 1a	1	English 1b	1
English 3	3	English 3	3
Drawing 1, *6	2	Military 2, *3	1
Military 1, *3	1	Physical training *2	2-3
Physical training *2	2-3		
	19 2-3		18 2-3

SOPHOMORE YEAR

Agronomy 3, †4	2	Agronomy 4	2
Animal Industry 3	2	Poultry Husbandry 2	2
Animal Industry 4, †2	1	Poultry Husbandry 2a, †2	1
Chemistry 14, †8	4	English 2b	1
English 2a	1	Horticulture 1	2
Modern Language	3	Horticulture 4	2
Mathematics 4, 2	5	Modern Language	2
Poultry Husbandry 1	1	Mathematics 1, 2	5
Poultry Husbandry 1a, †2	1	Forestry 1	2
Military 1, *3	1	Military 2, *3	1
	21		20

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5	2	Animal Industry 7	2
Agronomy 5a, † 2	1	Animal Industry 8, * 3	1
Animal Industry 5	2	Bacteriology 1, † 6	3
Animal Industry 6, 2	1	Biological Chemistry 2, † 6	3
Harticulture 2	3	Agricultural Chemistry 2	2
Biological Chemistry 1	5	Horticulture 3	3
Modern Language	3	Modern Language	2
Botany 8	3	Veterinary Science 6	3
		Veterinary Science 8	1
	20		20

SENIOR YEAR

Agronomy, Animal Industry, Horticulture, or Poultry Husbandry	3	Agronomy, Animal Industry, Horticulture, or Poultry Husbandry	2
Veterinary Science 7	2	Thesis (minimum)	3
Veterinary Science 8	1	Electives	12
Forestry 2, † 3	1 1-2		
Thesis (minimum)	3		17
Electives	7		
	17 1-2		

The following subjects are included in a major in Agriculture:

Agronomy 1 to 5a inclusive	2	credits
Animal Industry 1 to 8 inclusive	2 5-10	credits
Horticulture 1 to 4 inclusive	2	credits
Veterinary Science 6 to 8 inclusive	1 3-5	credits
Biological Chemistry 1 and 2	1 3-5	credits
Forestry 1 and 2	3-5	credit
Agricultural Chemistry 3	1	credit
Bacteriology	3-5	credit
Poultry 1 and 1a, 6 and 6a	1	credit
Total	12 9-10	credits

At graduation the student receives the degree of Bachelor of Science. Upon completion of graduate work as prescribed by the University, and the presentation of a satisfactory thesis, he receives the degree of Master of Science.

Course in Agriculture for Those who Intend to Become Teachers of This Subject in the Public Schools

This course is offered in response to a call for teachers capable of teaching chemistry and agriculture in schools and academies. In order to receive a degree 150 hours, or 30 credits, must be received. The following course as laid down covers 146 hours. The remaining 4 hours have been purposely left open for elective work in order that the student may receive as liberal a training in cultural studies, as is consistent with the amount of technical work necessary. It is recommended that the electives be taken from the departments of biology, history, economics, chemistry, physics, or English.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 2, † 4	2	Chemistry 4, † 4	2
English 1a	1	English 1b	1
English 3	3	English 4	3
Drawing 1, * 6	2	Drawing 2, * 6	2
Modern Language	3	Modern Language	2
Mathematics 4, 2	5	Mathematics 1, 2	5
Military 1, † 3	1	Military 1, † 3	1
Physical Training * 2	2-3	Physical Training * 2	2-3
	19 2-3		19 2-3

SOPHOMORE YEAR

Agronomy 1	2	Agronomy 4	2
Agronomy 2, * 3	1	Animal Industry 1	2
Biology 1	5	Animal Industry 2, † 2	1
Chemistry 14, † 8	4	Botany 1	5
Education 1	3	Education 2	2
English 2a	1	Chemistry 15, † 8	4
Mechanical Engineering 1b, * 4	1 1-3	Horticulture 1	2
Military Science * 3	1	Mechanical Engineering 2, * 4	1 1-3
	18 1-3	Military Science * 3	1
			20 1-3

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3, † 4	2	Horticulture 4	2
Agronomy 5	2	Horticulture 3	3
Agronomy 5a, † 2	1	Education 8	3
Animal Industry 3	2	Agronomy 11, * 3	1
Animal Industry 4, † 2	1	Modern Language	2
Poultry 1	1	Zoölogy 10	4
Poultry 1a, † 2	1	Veterinary Science 6	3
Education 5	3	Veterinary Science 8	1
Modern Language	3		19
Horticulture 2	3		
Elective	2		
	21		

SENIOR YEAR

Animal Industry 5	2	Animal Industry 7	2
Biological Chemistry 1	5	Animal Industry 8, † 2	1
Botany 8	3	Agricultural Chemistry 3	2
Physics 12	5	Bacteriology 1, † 6	3
Veterinary Science 7	2	Horticulture 8	2
Elective	2	Physics 5, * 5	2
Veterinary Science 8	1	Forestry 1	2
	20	Elective	3
			17

The Special Courses in Agronomy, Animal Industry, Horticulture, Poultry Husbandry, and Domestic Science.

The Special Courses are designed for young men and women who cannot well spend four years in preparing themselves to become farmers but who wish to secure special training in certain agricultural subjects. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, domestic science, or general farm crops and farm management.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. If they

subsequently desire to become candidates for a degree, or to take a regular course, they will be required to pass all the entrance examinations. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, not for those who are incompetent to pursue a regular course.

The annual expenses for courses of one year or more are the same as those for students in the four year courses. Tuition is free except in forestry and domestic science.

The Two Years' School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultrymen or gardeners, but who cannot devote time to high school or college training.

The same equipment is used and the same instructors give the work as in the four years' university course, but the work is of a more elementary nature. All the classes are separate and distinct from the four year classes, and in no case will college credit be allowed for work done in the school course.

There are no entrance examinations required of those who desire to enter the school course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work at the college, for which reasonable wages will be paid, or on some farm approved by the faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester	*Spring Semester*
Soils and Soil Management	Fertilizers and Farm Mechanics
Animal Industry	Animal Industry and Dairy Work
Fruit Handling	Fruit Growing
English	Poultry
Business Arithmetic and Farm Accounts	English
Carpentry	Veterinary Science
Practical Dairying and Stock Management	Forge Work
Farm Practice and Laboratory Work	Practical Dairying and Stock Management
Fruit Picking, Packing, and Laboratory Work	Farm Practice and Laboratory Work
	Orchard Practice and Laboratory Work

SECOND YEAR

Farm Crops and Farm Mechanics	Farm Crops and Farm Mechanics
Animal Industry	Animal Industry
Plant Propagation	Vegetable Gardening
Poultry	Insects
Farm Chemistry	Poultry Management
Farm Botany	Forestry
English	Veterinary Science
Farm Practice and Laboratory Work	English
Practical Dairying and Stock Management	Practical Dairying and Stock Management
Seed Testing and Nursery work	Farm Practice and Laboratory Work
	Garden Practice and Laboratory Work

One Year's Teachers Course

Nearly every state in this country requires that the elements of agriculture shall be taught in the public schools. Maine offers extra state aid to schools that will introduce such a course. There is a call, at salaries one-third to one-half larger than are usually paid, for teachers who have had a training in this subject.

The graduates of the College of Agriculture are not sufficient in number to fill these places, and in order to relieve the situation "the one year course" is offered.

Agriculture

This course comprises a solid year of work in agriculture and closely related sciences and is designed for high school teachers, normal school teachers, and others who desire to fit themselves to teach agriculture in the secondary schools of the state but who cannot take the regular agricultural course leading to the B. S. degree. It is open to college graduates, high school teachers with at least two years experience, and normal school graduates who have had three years' experience in teaching.

The course of study is as follows:

Fall Semester

Soils	3	Agricultural Economics	2
Agricultural Botany	2	Animal Breeding	3
Agricultural Chemistry	3	Fertilizers	3
Agricultural Chemistry Laboratory * 3	1	Horticultural Laboratory * 3	1
Anatomy and Physiology of Domestic Animals	2	Manual Training * 3	1
Animal Breeding	3	Plant Propagation	3
Fruit Growing and Pomology	3	Poultry	2
Horticultural Laboratory * 3	1	Poultry Laboratory * 3	1
Manual Training * 3	1	Soil Laboratory * 3	1
Soil Laboratory * 3	1	Stock Judging * 3	1
Stock Judging * 3	1		

Spring Semester

First Eight Weeks		*Second Eight Weeks*	
Animal Feeding	3	Agricultural Engineering and Farm Management	3
Economic Entomology	2	Agricultural Engineering * 3	1
Education	2	Bacteriology Laboratory * 3	1
Field Crops	3	Buttermaking * 3	1
Field Crops Laboratory * 3	1	Dairying	3
Landscape Gardening	3	Forestry	2
Landscape Gardening Laboratory * 3	1	Poultry	3
Live Stock Management * 3	1	Poultry Laboratory * 3	1
Manual Training * 3	1	School Gardening * 3	1
Veterinary Science	3	Vegetable Gardening	3
		Vegetable Gardening Laboratory * 3	1

The Short Courses in General Agriculture and Dairying, Horticulture, and Poultry Management

The short course in general agriculture and dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen, and others who desire to learn milk testing, butter making, the principles of animal nutrition and practices of feeding, breeding, judging stock, economical use of fertilizers, principles of crop production, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and co-operation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort will be made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring and judging, and killing and marketing. Supplementing the work of the regular instructors in the University some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of incubation the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent on request by applying to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the College for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one session is given up to problems of rural betterment, a section is arranged where domestic science for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

The Department of Agricultural Extension

This department of the College of Agriculture offers *correspondence courses, lecture courses, demonstration work, and coöperative experiments.*

This work is intended to help persons directly on the farm and in the home; to aid those who desire definite instruction in practical agriculture, horticulture, animal industry, and domestic science, but who cannot take a long or regular course at the University. It supplements the teaching and experimenting of the College of Agriculture and the Experiment station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the College or procured from the U. S. Department of Agriculture, or from the various Experiment Stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1.—Farm Crops and Crop Production.
Course 2.—Farm Management.
Course 3.—Feeding and Breeding of Farm Animals and Dairying.
Course 4.—Poultry Keeping.
Course 5.—Fruit Growing and Vegetable Gardening.
Course 6.—Forestry.
Course 7.—Home Economics.
Course 8.—Elementary Agriculture.
Course 9.—Domestic Science.

More definite information will be sent upon request.

Lecture Courses

For these lectures the College of Agriculture will send members of the Faculty to speak at grange meetings, farmers' institutes, and other gatherings, if the traveling expenses of the lecturer are paid by those holding the meeting.

Demonstration Work

For this work the College of Agriculture will send members of the Faculty who will make demonstrations, showing as well as telling, how to solve many practical farm problems. These demonstrations are made

on the farms and in the barns of the farmer, and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing (use of Babcock tester); stock judging; potato spraying; orchard spraying; pruning and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Cooperative Experiments

Experiments will be undertaken in coöperation with farmers along such lines as the following: the determination of the formula best suited for certain fields; the eradication of noxious weeds; the determination of the best means for increasing the hay crop.

During the past year experiments with corn, hay, and fertilizers have been carried on in every county in the state.

Circulars giving full information upon these subjects will be sent upon request.

Besides the Demonstration work, Correspondence, and Lecture Courses, the College of Agriculture welcomes all kinds of correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

The Forestry Course

A complete undergraduate course in forestry is arranged, which may serve as the basis not only of practical work in forestry, but also of a liberal education. A knowledge of the principles of forestry in its different branches is given to the student, and some practice work is done in the forest. For students of agriculture this course offers work which will give a training in the management of the farmer's woodlot.

The instruction in this department consists of lectures, recitations, laboratory, and field work. The woodland belonging to the University, together with adjacent land covered by a young forest, furnishes a field for the study of many forest problems.

Students who complete the course are admitted to advanced standing in the graduate schools of forestry and are thus able to shorten the time required to obtain a master's degree. Students completing the course have also gone directly into practical work.

There are good openings for the student to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying the expense of their University course.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Botany 1	5
English 1a	1	English 1b	1
English 3	3	English 4	3
Drawing 1, *6	2	Forestry 1	2
Mathematics 2, 4	5	Drawing 2, *6	2
Modern Language	3	Mathematics 2, 6a	5
Military 1, *3	1	Modern Language	2
Physical Training *2	2-3	Military 1, *3	1
		Physical Training *3	1
	20 2-3		22

SOPHOMORE YEAR

Agronomy 1	2	Botany 3	4
Agronomy 2, †2	1	Botany 11	4
Botany 2	4	Civil Engineering 2b, 2c	1 2-3
Botany 10	4	Chemistry 2	3
Civil Engineering 1a, 2a	2 2-3	Chemistry 4, †2	1
Chemistry 1	2	English 2b	1
Chemistry 3, †2	1	Modern Language	3
English 2a	1	Military 1, *3	1
Modern Language 3	3		
Military 1, *3	1		18 2-3
	21 2-3		

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Geology 1	3	Zoölogy 10	4
Zoölogy 4	2	Botany 9	2
Botany 3	4	Civil Engineering 9a	1
Forestry 6	2	Civil Engineering 9b	2
Forestry 8, *6	2	Forestry 7	2
Civil Engineering 4b, 4c, *6	2	Forestry 9, *6	2
Electives	3	Electives	5
	18		18

	SENIOR YEAR				
Zoölogy 11	2		Forestry 11, *3	1	
Forestry 10, *6	2		Forestry 13	1	
Forestry 12	3	1-2	Forestry 14, †10	5	
Forestry 4	1		Forestry 5	2	
Electives	9		Electives	8	
	17	1-2		17	

Electives

Animal Industry 3	2		Zoölogy 8	2	
Animal Industry 4, †2	1		Zoölogy 5	5	
Animal Industry 5	2		Veterinary Science 2	3	
Zoölogy 7	2		Bacteriology 2	1	
Bacteriology 3, †6	2		Bacteriology 4		
Zoölogy 2	4		Botany 5		
Botany 5			Chemistry 8	2	
Chemistry 7	3		Chemistry 13	3	
Chemistry 14, †8	4		Chemistry 15, †8	4	
Civil Engineering 3b	1		Civil Engineering 3a	2	
Civil Engineering 4b	1		Civil Engineering 4a	1	
Civil Engineering 4c	1		Civil Engineering 8	2	
English 17	2		English 18	2	
English 22	3		English 23	3	
German			German		
French			French		
Spanish			Spanish		
History			History		
Mathematics	5		Mathematics	7	

Fall Semester			*Spring Semester*		
Mechanical Engineering 1b, *4	1	1-3	Mechanical Engineering 2, *4	1	1-3
Drawing 10, *6	2		Philosophy 4	2	
Physics 12	5		Physics 5, *5	2	

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Four Years' Course in Domestic Science and Elementary Domestic Art

This course leading to a B. S. degree prepares women to teach Domestic Science and Elementary Domestic Art in elementary, high, and normal schools, and in colleges. It gives instruction in cookery, dietetics, marketing, serving, household economics, laundry-work, sewing, and handwork. A foundation for the practical work is laid in pursuing a thorough course in chemistry, biology and physiology, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this course must meet the regular college requirements.

Laboratory fess are charged to cover cost of materials used. Students of the University electing these courses are also required to pay the laboratory fees. These are as follows:

Cookery courses 1-7, each $5 a semester
Cookery courses 9-12, each $10 a semester
Cookery course 8, $16 a semester
Handwork courses $3 a semester
Household economics $1 a semester
Laundry-work $1 a semester
Practical housework $3.50 a semester
Household administration course 34, $1 a semester

The Four Years' Course in Domestic Science and Elementary Domestic Art

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, † 4	2	Chemistry 4, † 4	2
Biology 1	5	Biology 1	5
English 1a	1	English 1b	1
English 3	3	English 4	3
Modern Language	3	Modern Language	3
Cookery 1	2	Cookery 2	2
Sewing 1, † 3	1 1-2	Sewing 2, † 3	1 1-2
	19 1-2		20 1-2

SOPHOMORE YEAR

Fall Semester			*Spring Semester*		
Subject	Hours		Subject	Hours	
Chemistry 14, † 10	5		Chemistry 7	5	
English 2a	1		English 2b	1	
Mathematics 4, † 2	5		Modern Language	3	
Modern Language	3		Sanitary Science	2	
Art 25, † 3	1	1-2	Art 26, † 3	1	1-2
Cookery 3	2		Cookery 4	2	
Handwork 19, † 3	1	1-2	Handwork 20, † 3	1	1-2
			H. Administration 30, † 3	1	1-2
	19			17	1-2

JUNIOR YEAR

Biol. Chemistry 1	5		Biol. Chemistry 2, † 6	3	
Physics 12	5		Physics 5, * 5	2	
Philosophy 1	3		Philosophy 2	3	
Art 27, † 3	1	1-2	Bacteriology 2	1	
Cookery 5	2		Art 28, † 3	1	1-2
Sewing 15, † 3	1	1-2	Cookery 6	2	
			Sewing 16, † 3	1	1-2
	18		Elective	4	
				18	

SENIOR YEAR

Education 1	3		Education 2	3	
Education 5	3		Education 7	2	
Methods 35	1		Practice Teaching 36	1	
Practice Teaching 36	1		H. Administration 33	1	
H. Administration 32	2		Mech. Engineering 20	1	
Cookery 7	2		Cookery 8, † 3	1	
Handwork 21, † 6	3		Handwork 22, † 6	3	
H. Administration 29, † 2	1		H. Administration 31	1	
Economics 1a	2		Thesis 37	2	
			Elective	4	
	18			19	

The Two Years' Course in Domestic Science and Elementary Art.

This course aims to prepare women for teachers in Domestic Science and Elementary Domestic Art. It is offered to those who find it impossible to remain at the University for a longer period. This course does

not lead to a degree but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent and who have some practical knowledge of housework are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the University, courses in elementary chemistry, physics, and physiology. For information concerning fees see the four years' course.

First Year

Philosophy 1	3		Philosophy 2	3	
Chemistry 1	2		Chemistry 2	3	
Chemistry 3, † 4	2		Chemistry 4, † 4	2	
Biology 1	5		Biology 1	5	
Cookery 9	3		Cookery 10	3	
Art 25, † 3	1	1-2	Handwork 23, † 3	1	1-2
Sewing 17, † 4	2		Art 26, † 3	1	1-2
			Bacteriology 1, † 6	3	
	18	1-2	Bacteriology 2	1	
				23	

Second Year

Education 1	3		Education 2	3	
Methods 35	1		Practice Teaching 36	1	
Practice Teaching 36	1		Biological Chemistry 2, † 6	3	
Biol. Ch. 1	5		Sanitary Science	2	
Cookery 11, † 4	2		Mech. Engineering 20	1	
H. Administration 34	1		Cookery 12, † 4	2	
H. Administration 29, † 2	1		Cookery 8, * 3	1	
Art 27, † 3	1	1-2	Art 28, † 3	1	1-2
Sewing 18, † 4	2		Handwork 24, † 3	1	1-2
			H. Administration 30, † 3	1	1-2
	17	1-2	H. Administration 31	1	
			H. Administration 32	2	
			H. Adminisration 33	1	
				21	1-2

Three Months' Courses

Twice a year, terms beginning the first week of October and the second week of January, courses in Household Economics, Laundry-work, and Principles of Cookery or Fancy Cookery will be given. These courses are offered to those not in regular attendance at the University and for these fees will be charged as follows:

Home Economics	$10
Laundry-work	10
Principles of Cookery	15
Fancy Cookery	18

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

AGRONOMY

PROFESSOR BELL; PROFESSOR SHERWIN; PROFESSOR SIMMONS

1. SOILS.—Lectures and recitations beginning with the classification of and fundamental principles underlying the science of Agriculture; the nature, origin, formation, and classification of soils; the relation of soils to plants, water, heat, gases, etc.; the chemical elements in soils; factors determining soil fertility; the conservation of soil moisture; the adaptability of crops to different kinds of soils; the objects and benefits of crop rotation; the improvement of unproductive land; the need, advantages and methods of drainage; irrigation. *Two hours a week.* Fall semester.

2. SOIL PHYSICS.—A course required in connection with course 1, consisting of a study of the different soils under field conditions; soil surveying and mapping; the collecting and sampling of soils for laboratory work. This laboratory course is designed to prepare the student to better understand the different methods of treatment of soils and the effect of these methods and soil texture upon structure, moisture, aeration, fertility, and production. The work comprises the determination of such constants as specific gravity, water-holding capacity, evaporation, and capillary power of various types of soils, and the mechanical analysis of soils. * *Three hours a week.* Fall semester.

3. AGRICULTURAL ENGINEERING AND FARM MECHANICS.—(a) *Farm surveying and Drainage.* The plotting of farms and the measurement of land; leveling for drains, estimating size of tile required, cost of drain, etc.; the making of roads, with practice in the construction of roads on the college farm.

(b) *Farm Mechanics and Farm Machinery.* A study of the simpler laws of mechanics used in operating farm implements; the principles of

draft, the handling in the field, the taking apart and the putting together of the different classes of farm implements in possession of the department; the relative merits of wind, gasoline, denatured alcohol, steam, and electricity, as sources of power on the farm.

(c) *Farm Management.* A study of different forms and types of farming; the keeping of farm accounts; the planning of a season's work; the management of men and teams; and estimated cost of different farming operations.

(d) *Rural Architecture.* The planning, designing, location, and construction of farm buildings, including water supply, sewage, etc. † *Four hours a week.* Fall semester.

4. Soil Fertility and Fertilization.—A study of soil fertility as influenced by the source and formation of soil, leaching, drainage, growth of vegetation, and different types of farming. The use of fertilizers; the composition, cost, and value of fertilizers from different sources; the working out of fertilizer formulæ suitable to certain crops, and methods, rate, and time of applying to the land. Practice in home mixing of fertilizers will be given. *Two hours a week.* Spring semester.

5. Field Crops.—Lectures and recitation work on the history, distribution, uses, chief characteristics, and adaptability of the principal farm crops; the best methods of producing them, including crop rotations, preparation of the land, fertilizing and seeding; a study and treatment of the injurious insects and diseases affecting them, and the harvesting, marketing, and storing of crops. *Two hours a week.* Fall semester.

5a. Laboratory Course in Field Crops.—To be taken with course 5. † *Two hours a week.* Fall semester.

6. Advanced Agronomy.—Elective advanced work for those who have completed courses 1 to 5a inclusive. Lectures on plant breeding as applied to farm crops; farm management, and soil management. Special study is given to Experiment Station literature, methods, and work. Each student elects and carries on some line of original investigation and research. *Two hours a week.* Fall semester.

6a. Laboratory Advanced Agronomy.—A course to be taken with and supplementing Agronomy 6. † *Two hours a week.* Fall semester.

7. Advanced Agronomy.—A continuation of course 6. *Two hours a week.* Spring semester.

8. General Agriculture.—A history of agriculture from the earliest times, including that of the Jews, Egyptians, and Romans, to the present day; the beginning of British agriculture, and the development of modern agriculture with especial reference to that of England, Germany,

France, and other foreign countries; the agriculture of the United States, its influence on social conditions, its relation to the State and Nation; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the development of plant and animal life; the evolution of farm machinery and progress in agricultural education. Lectures supplemented by illustrative material and lantern slides. Elective and open to all students of the University. *One hour a week.* Spring semester.

9. Seminary.—A study of current agricultural literature and topics, assigned readings from which abstracts and reports are to be given before the class. Elective. † *Two hours a week.* Spring semester.

10. School Gardening.—A course for those taking the teachers' course in agriculture. It consists of planting seed and propagating plants in the greenhouses in preparation for the garden work; and the laying out, planting, and caring for a plot of land arranged as a school garden. * *Three hours a week.* Spring semester.

ANIMAL INDUSTRY

Professor Campbell; Mr. Dice

1. Animal Breeding.—A study of the market and breed types of dairy cattle, beef cattle and sheep; their history, development, breed characteristics and economic values. The work is given by lectures and text-books. *Two hours a week.* Spring semester.

2. Live Stock Judging.—Practice in the use of score cards and judging, handling and management of dairy cattle, beef cattle and sheep. This course is taken in conjunction with Animal Industry 1. † *Two hours a week.* Spring semester.

3. Animal Breeding.—A study of the market and breed types of swine and horses, their history, development, breed characteristics and economic values. Lectures and recitations on the principles of breeding. *Two hours a week.* Fall semester.

4. Live Stock Judging.—Practice in the use of score cards, and judging, handling and management of swine and horses. This course is taken in conjunction with Animal Industry 3. † *Two hours a week.* Fall semester.

5. Animal Feeding.—Food requirements of different kinds of animals; composition of foods and the nutrients furnished by them; feeding formulas; calculating rations; valuation of foods; pasturing, soiling and methods of feeding. *Two hours a week.* Fall semester.

6. Dairying.—A study of the Babcock test; use of lactometer, determination of acidity and adulterations. Given by lectures, text-books, and practice in dairy laboratory. † *Two hours a week.* Fall semester.

7. Dairying.—Lectures and recitations upon the composition and formation of milk; its production and aeration, pasteurization, separation, manufacture into butter, and marketing. *Two hours a week.* Spring semester.

8. Laboratory Dairying.—Practice in handling and testing milk and cream, for butter fat, acidity, and solids; ripening cream; making butter and operating dairy machinery. This must be in conjunction with or preceded by Animal Industry 6 and 7. * *Three hours a week.* Spring semester.

9. Advanced Animal Feeding.—This course is devoted to the methods and practices of successful feeders in the production of milk, meat, and the rearing of horses. Elective for those who have completed Animal Industry 5. *Two hours a week.* Fall semester.

10. Advanced Dairying.—This course is intended for those who desire to follow some line of dairying. It will deal with such problems as the handling of milk for the city trade, certified milk plants, and those problems pertaining to the creamery. Elective for those who have completed Animal Industry 6, 7, and 8. *Two hours a week.* Fall semester.

11. Advanced Animal Breeding.—Lectures upon the formation of flocks, herds, etc.; a study of pedigrees, records, and the practices of successful breeders. Elective for those who have completed Animal Industry 1 to 4, inclusive. *Two hours a week.* Spring semester.

12. Advanced Live Stock Judging.—This course is intended for those who desire more practice in the judging of live stock than is given in Animal Industry 2 and Animal Industry 4. It will include score card work and comparative judging. Elective for those who have completed Animal Industry 1 to 4, inclusive. † *Two hours a week.* Spring semester.

13. Cheese Making.—Lectures and recitations upon the manufacturing and curing of Cheddar and other brands of cheese. Elective for those who have completed Animal Industry 6, 7, and 8. *Two hours a week.* Fall semester.

14. Cheese Making.—Practice in the laboratory. Taken in conjunction with Animal Industry 13. † *Four hours a week.* Fall semester.

BACTERIOLOGY AND VETERINARY SCIENCE

Professor Russell

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. This course

may be taken alone or in connection with Bacteriology 2. † *Six hours a week.* Spring semester.

2. Bacteriology.—A lecture course open to all students. Should be elected by students taking Bacteriology 1 as well as by students who cannot take a laboratory course. Subjects considered will include history of bacteriology, classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products, the relation of bacteria to health and disease, immunity. *One hour a week.* Spring semester.

3. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogeric bacteria. Bacteriology 1 is a prerequisite. † *Six hours a week.* Fall semester.

4. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Only open to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

5. Veterinary Science.—A laboratory course in normal animal histology. This course is designed for students preparing for the study of human or veterinary medicine and for agricultural students specializing in animal industry. The work will consist of a microscopical study of the anatomical elements of the animal body and their various combinations in tissues and organs. Books of reference will be studied in connection with the laboratory work. † *Four hours a week.* Fall semester.

6. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals and their treatment to preserve and restore health. *Three hours a week.* Spring semester.

7. Veterinary Science.—A continuation of Veterinary Science 2. *Two hours a week.* Fall semester.

8. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.* Fall and spring semester.

9. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.* Fall semester.

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Merrill

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source and assimilation of plant food; the composition of the animal body and of food materials; the chemical changes involved in the digestion and assimilation of food; and the chemical

processes and methods of investigation by which these subjects are studied. *Five hours a week.* Fall semester.

2. Laboratory Biological Chemistry.—A study of the proteids, fats, and carbohydrates; the digestive enzymes; blood and other tissues of the animal body; bile, milk, and other secretions. A continuation of the preceding course. † *Six hours a week.* Spring semester.

3. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; and the chemistry of milk and other dairy products. *Two hours a week.* Spring semester.

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter and other dairy products. The course is designed for students desiring to take up experiment station work. Open to students who have completed the courses Chemistry 1, 2, 3, 4, 7, 8, 14, 15, 16. † *Ten hours a week.* Spring semester.

5. Geology.—A study of the earth's history and development, with especial attention to structural and physiographical geology. *Three hours a week.* Fall semester.

6. Economic Geology.—An elementary course in applied geology. The course will include a general survey of our mineral resources; and a study of rocks and their uses as building stone, as road material, and as sources of lime and cement. *Two hours a week.* Fall semester.

DOMESTIC SCIENCE

Professor Comstock

Cookery

1. Cookery.—Lectures, recitations and laboratory practice. This course provides instruction in the general principles controlling the preparation of food with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Serving, taken in conjunction with the course in cookery, deals with the arrangement of a dining room, table equipment, and rules for table service. Practical serving of at least one meal. Recitation, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

2. Cookery.—Continuation of course 1. Marketing is included in the work of this semester. Lectures and recitations on purchasing and care of general supplies: vegetables, fruits, meats, poultry, and fish. Dairy products considered; adulteration and preservation of food. Recitation, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

3. Cookery.—Canning and preserving occupy six weeks of this semester, the remainder of the time is given to general cookery. Accounts are taken this semester. The work includes household and institutional accounts; inventories; requisitions; making of bills; payment by check; vouchers; contracts. Open to students who have taken courses 1 and 2. Recitation, *one hour a week;* laboratory, † *two hours.* Fall semester.

4. Cookery.—Continuation of course 3. Open to students who have completed courses 1, 2, and 3. Recitation, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

5. Diet for Children.—A thorough review of the principles of cookery. Practical tests given in which speed and dexterity are noted. A modification of the adults diet as adapted to children is considered. Open to students who have taken courses 1, 2, 3, and 4. Recitation, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

6. Diet for Invalids.—Special consideration of food for the sick and convalescent. Same requirements as for course 5. Recitation. *one hour a week;* laboratory, † *two hours a week.* Spring semester.

7. Cookery.—A return to general cookery is made through work in large quantities, and the preparing and serving of meals. Demonstration work is another feature. Open to students who have taken courses 1, 2, 3, and 4. Recitation, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

8. Fancy Cookery and Field Work.—A course which gives instruction in serving a formal dinner, fancy cookery including garnishing. Field work consists in visiting a model dairy, wholesale grocery, meat market, flour mill, canning factory, etc. Required work in the last semester of the two courses offered. * *Three hours a week.* Spring semester.

9. Cookery.—Designed for those taking the two years teachers course. Includes instruction in general principles of cookery and study of typical foods. Recitation, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

10. Cookery.—Continuation of course 9. Recitation, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

11. Advanced Cookery.—Canning, preserving, and elaboration of the principles of cookery as taught in courses 9 and 10. Special diet for children given the last part of the semester. † *Four hours a week.* Fall semester.

12. Diet for Invalids.—Continuation of course 11 and diet for invalids. † *Four hours a week.* Spring semester.

Sewing

13. Hand Sewing.—This course includes the fundamental principles of hand sewing taught in connection with the making of towels, napkins, aprons, skirts, etc. † *Three hours a week.* Fall semester.

14. Hand Sewing.—Making of undergarments by hand after a pattern. † *Three hours a week.* Spring semester.

15. Machine Sewing.—Drafting of patterns for undergarments and an unlined dress. † *Three hours a week.* Fall semester.

16. Machine Sewing.—Continuation of course 3. † *Three hours a week.* Spring semester.

17. Hand Sewing.—This course presents the essentials of courses 1 and 2 in a condensed form. † *Four hours a week.* Fall semester.

18. Machine Sewing.—This course presents the essentials of courses 3 and 4 in a condensed form. † *Four hours a week.* Fall semester.

Handwork

19. Handwork.—Consists of braiding, knotting, netting, knitting, crocheting, weaving, caning and basketry. † *Three hours a week.* Fall semester.

20. Handwork.—Continuation of course 1. † *Three hours a week.* Spring semester.

21. Advanced Handwork.—Basketry and weaving. † *Six hours a week.* Fall semester.

22. Advanced Handwork.—Continuation of course 21. † *Six hours a week.* Spring semester.

23. Handwork.—Offered to students taking the two years course. It includes all the principles involved in course 1. † *Three hours a week.* Spring semester.

24. Handwork.—Continuation of course 5. † *Three hours a week* for ten weeks. Spring semester.

Art

25. Drawing.—This course consists of a study in line, light and dark, and color. † *Three hours a week.* Fall semester.

26. Design.—Emphasis this semester in art work is placed upon design. The designs made are used in basketry and weaving. † *Three hours a week.* Spring semester.

27. Construction.—This course consists of lectures and the making of a lower floor plan of a modern house. The details of window, door, wall, and fire-place construction, chimneys, pantry, etc., are carefully

considered. Special problem of planning Domestic Science kitchens. † *Three hours a week.* Fall semester.

28. Color Schemes.—Lectures on house furnishings and a practical problem of making color scheme using actual materials for the house planned in course 3. † *Three hours a week.* Spring semester.

Household Administration

29. Household Economics.—Lectures, recitations, and practice. Principles of housework examined. Methods studied and practical application made. † *Two hours a week.* Fall semester.

30. Laundry Work.—Principles and processes included in laundry work are studied. Equipment for the home and school, care of equipment; processes of laundering; sorting and soaking clothes; removal of stains; methods of handling cotton, linen, silk, woollen; special points considered with colored materials; rinsing, bluing, making soap, etc. † *Three hours a week.* Spring semester.

31. Home Nursing.—Considers the sick room and its appointments. Care of patient. Bandages, kind and technique. Contagious diseases; burns, frost-bites, etc. *One hour a week.* Spring semester.

32. Practical Housework.—This course affords opportunity for a student to show practically her power in managing a household and serving luncheons to twelve or more people in a specified time and with limited means. *Time to be arranged.* Counts as two hours a week one semester. Senior year.

33. Dietaries for Families.—This course reviews the chemistry and physiology of digestion; the metabolism of proteins, fats, and carbohydrates; function of food accessories; discussion of modern dietary standards; making of properly balanced menus. *One hour a week.* Spring semester.

34. Marketing, Serving, and Accounts.—Same general plan followed as outlined in cookery 1, 2, and 3. Required of two-year students. *One hour a week.* Fall semester.

35. Methods.—This course investigates the methods applicable to teaching Domestic Science and Domestic Art in the schools. Effort is made to discover the means whereby a wholesome atmosphere is secured in the school room and how the self-activity and self-direction of pupils may be fostered. Courses of study are outlined. *One hour a week.* Fall semester.

36. Practice Teaching.—Practice teaching is required of students in the senior year. This teaching is done under supervision. Time extends over twenty weeks at least of the year. † *Two hours a week,* for each semester.

37. Thesis.—A thesis on a subject relating to Domestic Science and showing independent work is required of all students taking the four years course. Equivalent to *one hour a week*. Spring semester.

Summer Term

1. Cookery.—This course will include the principles and practice of cookery, including study of foods and the preparation and serving of meals.

2. Household Administration.—Courses in laundry-work, household economics, also marketing, serving, and accounts.

FORESTRY

Professor Tower

[Note.—The courses in forest botany and forest zoölogy are listed under biology.]

1. General Forestry.—The importance and scope of the subject; forest as a soil-former and soil-improver; relation of forest to health of a community; relation to the State; esthetic value; influence on floods; importance of forest in irrigation; geographical distribution of forests. The course is recommended for the student in economics. Open to all students. *Two hours a week*. Spring semester.

3. Forest Mapping and Computing.—Making type and topographical maps using date of valuation surveys; practical work in computing aneroid readings for altitude; timber estimates from valuation surveys. Elective for Seniors. Time to be arranged. Spring semester.

4. Forest History.—The rise and development of forestry in European countries, the United States and other countries. Text-book, History of Forestry, by B. E. Fernow. *Two hours a week*. First-half of fall semester.

5. Forest Protection.—A consideration of the methods of economic protection of the forests. The European methods and conditions discussed and compared with our own. *Two hours per week*. Spring semester.

6. Silviculture.—A study of the facts which concern forest growth in the relation of the tree to external influences; characteristics of the forest, and of the forest regions of the United States; systems of reproducing forests naturally, thinnings and improvement cuttings. To be taken in connection with course 8. Open to those who have taken Biology 10 and 11. *Two hours a week*. Fall semester.

7. Silvicuture.—A continuation of course 6. To be taken in connection with course 9. *Two hours a week*. Spring semester.

8. Silviculture, Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 to 2000 acres of forest land in the vicinity of the University. A report accompanies the map describing the condition of the tract and type of forest growth. Open to students in Forestry who have had Drawing 1 and 2. **Six hours a week.* Fall semester.

9. Silviculture, Field Work.—A continuation of course 8. It includes practice in thinning and work in planting; practical test of germinating quality of tree seeds and a study of seedlings. The student is required to make a planting plan for about 100 acres of land and prepare a map of the tract. This course should be preceded by courses 6 and 7. **Six hours a week.* Spring semester.

10. Forest Measurements.—Practical instruction in the woods and in the office. Some recitations.

(1) Woods work.—The use of various hypsometers in ascertaining the height of standing trees; determining the contents of felled and standing trees and the volume of stands; study and use of American log scales; consideration of the methods of measurement used in the United States; study of the rate of growth of trees in diameter, height and volume.

(2) Office work.—Computing the data obtained in the woods; calculating the contents of logs in cubic feet, and the contents of trees and stands in cubic feet, cords and board feet; use of graphic methods in determining the average rate of growth in diameter, height and volume; construction of tables of rate growth, volume and yield. **Six hours a week.* Fall semester.

11. Forest Measurements.—A continuation of course 10. **Six hours a week.* First half of the spring semester.

12. Lumbering.—The industry considered from an economic standpoint; an account of the methods of lumbering in the different parts of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and prepare a written report on the operations of lumbering in that locality. Fall semester. Two-fifths credit is allowed for the time spent in the lumber camp and in preparing the report. Open to students taking forestry as a major subject. *Two hours a week.* First half of fall semester.

13. Forest Management.—Financial and economic considerations; the normal forest; principles and preparation of working plans. Open to those who have taken courses 6, 7, 8, 9, 10 and 11. *Two hours a week.* First half of the spring semester.

14. Thesis Work.—The preparation of a thesis. *Throughout the senior as arranged.*

HORTICULTURE

PROFESSOR GARDNER; MR. PALMER

Courses one to four inclusive are required of all students in the four years' course in the College of Agriculture. Courses five to ten inclusive are elective and open to students who have had sufficient preparation to do the work.

1. PRINCIPLES OF FRUIT GROWING.—A study of the methods of growing harvesting, storing, and marketing the small and large fruits. *Two hours a week.* Spring semester.

2. POMOLOGY.—A systematic study of the types and varieties of the leading groups of fruits, including practice in scoring. *Two hours a week* in classroom and † *two hours* in the laboratory. Fall semester.

3. ORCHARD PRACTICE.—A classroom and laboratory study of pruning, spraying, grafting, tree planting, and other orchard operations. *One hour a week* in classroom and † *four hours* in the laboratory and orchard. Spring semester.

4. VEGETABLE GARDENING.—A study of the principles of vegetable gardening, accompanied by practice in the actual growing of garden plants. *Two hours a week.* Spring semester.

5. GREENHOUSE MANAGEMENT.—A study of the different greenhouse crops, supplemented by practice in the regular greenhouse operations. Open to juniors and seniors. *One hour a week* in classroom and † *two hours* in the greenhouse. Fall semester.

6. GREENHOUSE MANAGEMENT AND CONSTRUCTION.—A continuation of course 5 and including a study of the principles of greenhouse construction and heating. Open to juniors and seniors. *One hour a week* in classroom and † *two hours* in the greenhouse. Spring semester.

7a. PLANT BREEDING.—A study of variation, its causes and laws, and heredity. Open to seniors. *Two hours a week.* Fall semester.

7b. PLANT BREEDING.—A study of breeding systems and practical breeding problems. A continuation of course 7a and must be preceded by it. *Two hours a week.* Spring semester.

8. LANDSCAPE GARDENING.—A study of the principles of landscape art and of the materials used in making landscape pictures. Special attention given to the improvement of the home and school grounds. Open to seniors. *Two hours a week.* Spring semester.

9. GENERAL HORTICULTURE.—An introductory course designed to cover the entire field of horticulture in a general way. Intended for students who desire a general knowledge of the subject. Elective and open to all students of the University. *Three hours a week.* Fall semester.

10. Horticultural Experimentation.—Original work for those desiring to become teachers and investigators. Open to seniors and graduate students. *Time to be arranged.*

MILITARY SCIENCE

The courses in this department are described on page 177.

PHYSICAL TRAINING

The courses in this department are described on page 178.

POULTRY HUSBANDRY

Professor Brown

Courses 1 and 1a and 6 and 6a are required of all four year agricultural students. The aim of courses 1 to 5 inclusive and 7 and 8 is to make it possible for students and others, who desire more work than can be obtained in the regular college exercises and three weeks short course in poultry husbandry, to come to the University and secure that knowledge by a system of electives.

1. Breeds.—A study of types and breeds of market and fancy poultry, their history, development, breed characteristics, economic and fancy values. *One hour a week.* Fall semester.

1a. Laboratory Practice.—The judging and scoring of the various breeds and varieties, and the handling, washing, and fitting of birds for exhibition. To be taken with course 1. † *Two hours a week.* Fall semester.

2. Poultry Management.—A study of feeding for egg production; incubation; brooding; housing; rearing of young stock; duck culture. *Two hours a week.* Fall semester.

2a. Laboratory Practice.—The setting up and operating of incubators and brooders, the feeding of young chicks, and the caponizing, growing, fattening, killing, dressing, and preparing of chickens for market. To be taken with course 2. † *Two hours a week.* Fall semester.

3. Poultry.—The subject considered as a business, as an investment, as an employment; its history, successes, failures, and possibilities. *One hour a week.* Fall semester.

3a. Laboratory Practice.—The planning and laying out of poultry plants, houses, and fixtures suitable for specialization on a large scale. † *Two hours a week.* Fall semester.

4. Markets and Marketing.—Consideration of the requirements of the best markets for poultry produce in America. The commission business, cold storage, co-operation. *One hour a week.* Fall semester.

5. Poultry Literature.—An advanced course in the study of the bulletins and reports of the experiment stations in this and other countries with particular attention to the work of the Maine Agricultural Experiment Station. *Two hours a week.* Fall semester.

6. Farm Poultry.—A study of poultry keeping on the farm, housing, feeding, marketing poultry products; ducks, geese, and turkeys. *Two hours a week.* Spring semester.

6a. Laboratory Practice.—The planning and building of poultry houses and appliances suitable for the farm, practice in the mixing of feeds, in the selection of breeding stock, and in the care and preservation of eggs. To be taken with course 6. † *Two hours a week.* Spring semester.

7. Insects and Diseases.—An advanced course in the recognition of treatment for, and remedies for the various insects and diseases affecting poultry. *Two hours a week.* Spring semester.

8. Original Research.—Indvidual work which may be entered upon by either graduates or undergraduates who have sufficient training and interest to pursue some special line of study. Many opportunities are offered in the field of scientific research in poultry from the standpoints of biology, chemistry, and physics. The number of hours a week will be determined at the time of registration. Fall or spring semester.

COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

GEORGE EMORY FELLOWS, PH. D., L. H. D., LL. D.
President of the University

JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy. Dean of the University

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry

JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*

GILMAN ARTHUR DREW, PH. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages

HAROLD SHERBURNE BOARDMAN, C. E.
Professor of Civil Engineering

ARTHUR CRAWFORD JEWETT, B. S.
Professor of Mechanical Engineering

WALTER KIERSTED GANONG, B. Sc.
Professor of Electrical Engineering

ROBERT JAMES SPRAGUE, PH. D.
Professor of Economics and Sociology

CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing

CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*

GUY ANDREW THOMPSON, M. A.
Professor of English Literature

WINDSOR PRATT DAGGETT, PH. B. *Professor of Public Speaking*

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

MINTON ASBURY CHRYSLER, PH. D.
Associate Professor of Botany

CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry

ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
WALTER MOLBRAY CURTIS, S. B.
Assistant Professor of Mechanical Engineering
*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
LEON ELMER WOODMAN, M. A. *Assistant Professor of Physics*
ARCHER LEWIS GROVER, B. S.
Assistant Professor of Drawing
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
PAUL LEONARD BEAN, B. S.
Assistant Professor of Civil Engineering
EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*
WALTER EVERETT PRINCE, M. A. *Instructor in English*
CHARLES JENKINS CARTER *Instructor in the Machine Shop*
LESLIE INGALLS JOHNSTONE, B. S.
Instructor in Civil Engineering
WILLIS FLYE WASHBURN, B. S. *Instructor in Chemistry*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
GEORGE EDWARD PEARSON, M. A. *Instructor in English*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
WALTER ELWOOD FARNHAM *Instructor in Drawing*
ROBERT RUTHERFORD DRUMMOND, B. S.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
GEORGE ALVIN SCOTT, B. S. in E. E. *Instructor in Physics*
BENJAMIN ENGLE KRAYBILL, PH. B.
Instructor in Industrial Chemistry
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
TRUMAN LEIGH HAMLIN, M. A. *Instructor in Mathematics*
WALTER EDMUND WILBUR, B. S. *Instructor in Mathematics*
ERNEST CONANT CHESWELL,
Instructor in Engineering Laboratory Practice
ALBERT THEODORE CHILDS, B. S., E. E.
Instructor in Electrical Engineering
ALICE MIDDLETON BORING, A. M. *Instructor in Zoölogy*
WARREN EDWARD CONNOR, B. S. *Tutor in Civil Engineering*
NORMAN HASKELL MAYO, B. S. *Tutor in Civil Engineering*
ERNEST CLAUDE DREW, B. S. *Tutor in Physics*

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*Absent on leave.

The following executive committee of the Faculty of Instruction of the College of Technology is given power to arrange courses, act upon petitions, and transact general business relating to the technical time of the department of engineering. The regular meetings of this body occur on the Thursday preceding the general faculty meeting at 4.30 P. M.

Professor Boardman, Chairman; Professor Ganong, Secretary; Dean Hart, Ex-Officio; Professor Jewett, Professor Weston, Professor Brown, Professor McKee, Assistant Professor Curtis, Assistant Professor Grover, Assistant Professor Bean, Mr. Johnstone, Mr. Farnham, Mr. Cheswell, Mr. Childs, Mr. Connor, Mr. Mayo.

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, and in various branches of engineering. The number of credits required for graduation in this college is thirty. In such technical courses it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the courses described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

The Chemical Course
The Civil Engineering Course
The Mechanical Engineering Course
The Electrical Engineering Course
The Chemical Engineering Course

At graduation in any of these courses the student receives the degree of Bachelor of Science. The diploma indicates which course has been completed.

The Chemical Course

This course is designed for those who plan to become professional chemists and analysts, or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment station.

Lectures and recitations are closely associated with practical work in the laboratories. The student is drilled in the use of chemical apparatus, in accurate observation, and in careful interpretation of directions.

Requirements for Graduation

Freshman Year

Fall Semester Subject	Hours	*Spring Semester* Subject	Hours
French 3a... } German 1a.. }	3	German 1b.. } French 3b... }	2
English 1a	1	English 1b	1
English 3	3	English 4	3
Mathematics 2, 4	5	Mathematics 2, 6a	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, † 4	2	Chemistry 4, † 2	1
Drawing 1, * 6	2	Drawing 2, * 6	2
Military 1, * 3	1	Military 1, * 6	1
Physical Training * 2	2-3	Physical Training * 2	2-3
	19 2-3		18 2-3

Sophomore Year

Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
Chemistry 9, † 4	2	Physics 5, * 5	2
Chemistry 29a	2	Chemistry 7, 3, † 4	5
Chemistry 14, † 10	5	Chemistry 16, † 10	5
English 2a	2	English 2b	1
Military 1, * 3	1	Military 1, * 3	1
	20		19

Junior Year

Modern Language	3	Modern Language	2
Chemistry 32a	2	Chemistry 32b	3
Chemistry 18, † 8	4	Chemistry 26, † 6	3
Chemistry 8	3	Agricultural Chemistry 2, † 10	5
Mathematics 22a	2	Bacteriology 1	3
Biological Chemistry 1	5	Mathematics 22b	2
	19	Elective	2
			20

SENIOR YEAR

Chemistry 12, † 6	3		Chemistry 24b	2	
Chemistry 23	3		Chemistry 22	5	
Chemistry 24a	2		Chemistry 13, † 3	1	1-2
Chemistry 19, † 8	4		Chemistry 29b	2	
Chemistry 25, † 4	2		Chemistry 22, † 10	5	
Geology 2 or Chemistry 33	2		Elective	5	1-2
Elective	2			17	
	18				

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis he receives the degree of Master of Science.

The Civil Engineering Course

The object of the course in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college course to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The attention of the student is directed to the fact that the scope of civil engineering is so broad that he may never expect to become expert in all of its branches, and that on the completion of his course he should obtain employment in that branch for which he seems best adapted.

It is impressed upon his mind that the granting of his bachelor's degree does not create him an engineer. It simply indicates that he has received the technical mental training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice, and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and from

the engineering world. These lectures tend to increase the interest of the student, and to bring him in touch with men outside of his institution.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, instrument rooms, and a filing and reference room, and is well equipped with apparatus.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. In the spring semester of the third year the student is required to choose between two optional lines of study. Option 1 consists of work in Hydraulic Engineering, while Option 2 consists of work in Railroad Engineering. The time devoted to each option is the same. Owing to the available facilities of the department not more than sixty per cent of the number of students in a class are allowed to select either option. A written statement is required from each student before the close of the fall semester giving his reasons for his selection. The head of the department reserves the right to make the final division.

The following subjects constitute the regular four years' course. Certain general subjects which are given as requirements, may, on presentation of satisfactory reasons to the head of the department, be omitted and others substituted.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	2
Chemistry 3, †4	2	Chemistry 4, †4	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Drawing 1, *6	2	Drawing 2, *6	2
Modern Language	3	Modern Language	2
Mathematics 2, 4	5	Mathematics 2, 6a	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		17 2-3

SOPHOMORE YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Civil Engineering 1a, 2a ...	2 2-3	Civil Engineering 2b, 2c....	1 2-3
English 2a.....	2	Civil Engineering 3a, 4a....	3
Mathematics 6b, 7.....	5	English 2b.....	1
Modern Language.....	3	Mathematics 8.....	5
Physics 1.....	5	Modern Language.....	2
Drawing 3, *6.....	2	Drawing 4, *6.....	2
Military 1, *3.....	1	Physics 2.....	3
		Physics 5, *5.....	2
	20 2-3	Military 1, *3.....	1
			20 2-3

JUNIOR YEAR

Civil Engineering 3b.....	1	Civil Engineering 6, *6....	2
Civil Engineering 4b, 4c, *6	2	Civil Engineering 9a.....	1
Civil Engineering 5.....	2	Civil Engineering 8 or Civil Engineering 19	2
Economics 1a.....	2		
Mechanics 5.....	5		
Mathematics 10.....	3	Civil Engineering 10.....	3
Physics 19.....	1	Civil Engineering 21.....	2
Physics 9.....	1	Civil Engineering 9b.....	2
Geology 2.....	2	Mechanics 6.....	5
		Economics 2a.....	2
	19		19

SENIOR YEAR

Civil Engineering 11, †4....	2	Civil Engineering 13a.....	3
Civil Engineering 12.....	3	Civil Engineering 13b.....	2
Civil Engineering 20.....	2	Civil Engineering 15, †6..	3
Civil Engineering 14, †12..	6	Civil Engineering 17 and Electrical Engineering 12b or Civil Engineering 24 and 25b	4
Civil Engineering 16 or Civil Engineering 25a ...	2		
History 5.....	2	Civil Engineering 26 and †4 Mechanical Engineering 25	2
		Economics 6.....	3
	17		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

The Mechanical Engineering Course

The prescribed studies in this course are intended to give the student a fundamental engineering training. Care has been taken so to arrange the sequence of subjects that the instruction given may have the greatest efficiency. Each course should be completed in its prescribed order. Variation from the stated order may only be made in important cases.

The first two years are preparatory for the professional work. In this time the prescribed courses in mathematics and language are completed. The student who would be successful in his professional studies should master thoroughly the required mathematics. A good reading knowledge of German or French should be acquired in this time, as many of the more important engineering papers first appear in those languages.

Time limitation prevents much specializing in the professional subjects of the last two years, other than by choosing among the various main branches of Civil, Electrical, or Mechanical engineering. Arrangements have been made, however, to allow a student of mechanical engineering to cover more ground in electrical engineering if his standing admits of the extra work.

The professional subjects should train a student to think for himself and have self-reliance in undertaking new work, as well as give him professional information. The general subjects prescribed are considered of especial importance to a student of applied science.

The tabulated list shows the prescribed subjects and the time given to each. More detailed information may be had from the brief description of each subject, found under "Courses of Instruction."

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	3	Chemistry 2	3
Chemistry 3, † 2	1	Chemistry 4, † 2	1
English 1a	1	English 1b	1
English 3	3	English 4	2
Modern Language	3	Modern Language	2
Mathematics 2, 4	5	Drawing 2, *6	2
Drawing 1, *6	2	Mathematics 2, 6a	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		17 2-3

Sophomore Year

English 2a	2	English 2b	1
Drawing 3, *6	2	Drawing 4, *6	2
Mathematics 6b, 7	5	Physics 2	3
Physics 1	5	Physics 5, *5	2
Modern Language	3	Mathematics 8	5
Mechanical Engineering 1, *6	2	Modern Language	2
Military 1, *3	1	Mechanical Engineering 2, *4	1 1-3
	20	Mechanical Engineering 4	3
		Military 1, *3	1
			20 1-3

Junior Year

Mechanical Engineering 24	1	Mechanical Engineering 5a *6	2
Mechanical Engineering 5a *6	2	Mechanical Engineering 8.	3
Mechanical Engineering 9	2	Mechanical Engineering 10	2
Mechanical Engineering 3, *4	1 1-3	Mechanical Engineering 15a, † 2 and lectures	3
Mechanics 5	5	Mechanical Engineering 19, *4	1 1-3
Economics 1a	2	Mechanics 6	5
Physics 9, *5	2	Economics 2a	2
Elective	3		
	18 1-3		18 1-3

SENIOR YEAR

Fall Semester			*Spring Semester*	
Subject	Hours		Subject	Hours
Mechanical Engineering 11.	3		Mechanical Engineering 7..	2
Mechanical Engineering 12, *6	2		Mechanical Engineering 15c, †4	2
Mechanical Engineering 15b †2	1		Mechanical Engineering 16	2
Mechanical Engineering 18, *6	2		Mechanical Engineering 17, *6	2
Civil Engineering 1b	2		Mechanical Engineering 13	2
Civil Engineering 2a		1-2	Mechanical Engineering 20.	1
Civil Engineering 22	1		Economics 6	3
Civil Engineering 23	2		Electives	3
Electrical Engineering 10a..	3			17
Electrical Engineering 11a, †4	2			
	18	1-2		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

The Electrical Engineering Course

This course is intended to provide a thorough preparation in the scientific principles involved in the practice of electrical engineering; to explain and illustrate the application of these principles to the design, construction, installation, and operation of apparatus with which the electrical engineer has to deal; and to give practice and experience in the care and running of the same. In addition to this purely electrical work the student takes up carpentry, forge work, machine work, mechanical drawing, mathematics, physics, mechanics, steam engineering, and other subjects allied to engineering work. The general courses, required or elective, include English language, logic, psychology, history, political economy, education, sociology, and constitutional law.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical substation converting from a three phase, 60

cycle, 115 volt alternating current system to direct current, by means of rotary converters and belted alternating current motors driving direct current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressure for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary coverter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Requirements for Graduation

Freshman Year

Fall Semester

Subject	Hours
Chemistry 1	3
Chemistry 3, †2	1
English 1a	1
English 3	3
Drawing 1, *6	2
Modern Language	3
Mathematics 2, 4	5
Military 1, *3	1
Physical Training *2	2-3
	19 2-3

Spring Semester

Subject	Hours
Chemistry 2	3
Chemistry 4, †2	1
English 1b	1
English 4	2
Drawing 2, *6	2
Modern Language	2
Mathematics 4, 6a	5
Military 1, *3	1
Physical Training *2	2-3
	17 2-3

Sophomore Year

English 2	2	English 2	1
Drawing 3, *6	2	Drawing 4, *6	2
Mechanical Engineering 1b, *4	1 1-3	Mechanical Engineering 2, *4	1 1-3
Modern Language	3	Mechanical Engineering 4	3
Mathematics 6b, 7	5	Modern Language	2
Physics 1	5	Mathematics 8	5
Military 1, *3	1	Physics 2	3
		Physics 5, *5	2
	19 1-3	Military 1, *3	1
			20 1-3

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Electrical Engineering 1a..	2	Electrical Engineering 1b...	3
Mechanics 5.....	5	Electrical Engineering 2b, †2	1
Mechanical Engineering 5c, *4	1 1-3	Mechanics 6.....	5
Physics 11, *7 1-2.....	3	Mechanical Engineering 5b, *4	1 1-3
Economics 1a.....	2	Mechanical Engineering 8..	3
Economics 7a or History 5	2	Mechanical Engineering 10.	2
Elective	3 2-3	Economics 2a.....	2
	19		17 1-3

SENIOR YEAR

Electrical Engineering 3a..	3	Electrical Engineering 3b...	2
Electrical Engineering 4a..	2	Electrical Engineering 5b...	1 1-2
Electrical Engineering 5a, †4	2	Electrical Engineering 7b...	2
Electrical Engineering 6a, †4	2	Electrical Engineering 6b, †4	2
Mechanical Engineering 26, †3	1 1-2	Electrical Engineering 8b, *4	1 1-3
Mechanical Engineering 11.	3	Economics 6.....	3
Civil Engineering 1a, 2a...	2 1-2	Mechanical Engineering 19, *4	1 1-3
Civil Engineering 23.....	2	Electrical Engineering 4b...	1
Civil Engineering 22.....	1	Elective	3 1-2
	19		17 2-3

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

The Chemical Engineering Course

This course is especially designed for those who intend to enter industries that require a more or less extensive knowledge of chemistry, as well as some knowledge of applied mathematics and of the engineering studies, thus fitting them for positions as chemists or managers of manufacturing plants.

FRESHMAN YEAR

Fall Semester			*Spring Semester*		
Subject	Hours		Subject	Hours	
German 1a } French 3a }	3		German 1b } French 3b }	2	
English 1a	1		English 1b	1	
English 3	3		English 4	3	
Mathematics 2, 4	5		Mathematics 2, 6a	5	
Chemistry 1	2		Chemistry 2	3	
Chemistry 3, † 4	2		Chemistry 4, † 2	1	
Drawing 1, * 6	2		Drawing, 2, * 6	2	
Military 1, * 3	1		Military 1, * 3	1	
Physical Training * 2		2-3	Physical Training * 2		2-3
	19	2-3		18	2-3

SOPHOMORE YEAR

Chemistry 29a	2		Chemistry 16, † 10	5	
Chemistry 14, † 10	5		Chemistry7, 3, † 4	5	
Physics 1	5		Physics 2	3	
Modern Language	3		Physics 5, * 5	2	
English 2a	2		Modern Language	2	
Mechanical Engineering 1b,			English 2b	1	
* 4	1	1-3	Military 1, * 3	1	
Military 1, * 3	1				
	19	1-3		19	

JUNIOR YEAR

Chemistry 8	3		Chemistry 32b	3	
Chemistry 18, † 8	4		Chemistry 16, 18, † 8	4	
Chemistry 32a	2		Chemistry 26, † 6	3	
Chemistry 21, † 4	2		Chemistry 13, † 3	1	1-2
Mechanical Engineering 26,			Mechanical Engineering 10.	2	
† 3	1	1-2	Mechanical Engineering 2,		
Mathematics 22a	2		* 4	1	1-3
Physics 11, * 7 1-2	3		Mathematics 22b	2	
Elective	2		Elective	3	5-6
	19	1-2		20	2-3

SENIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 24a	2	Chemistry 24b	2
Chemistry 12, † 6	3	Chemistry 22, † 10	5
Chemistry 23	3	Chemistry 29b	2
Chemistry 33 or Geology 2	2	Chemistry 25	2
Electrical Engineering 10a	3	Chemistry 28, † 2	1
Electrical Engineering 11a, † 4	2	Elective	5
Elective	3		17
	18		

DEPARTMENTS OF INSTRUCTION

CHEMISTRY

PROFESSOR MCKEE; PROFESSOR EASLEY; MR. WASHBURN; MR. KRAYBILL; MR. BRANN

1. GENERAL CHEMISTRY.—This course deals with the general principles of the science. Lectures and recitations. *Two hours a week.* Fall semester.

Courses 1, 2, 3 and 4 constitute the first year's work in chemistry and credit is not given unless the four courses are completed.

2. GENERAL CHEMISTRY.—This course is a continuation of course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds and chemical properties. Lectures and recitations. *Three hours a week.* Spring semester.

3. LABORATORY CHEMISTRY.—Laboratory work to accompany course 1. † *Four hours a week.* Fall semester.

4. LABORATORY CHEMISTRY.—A continuation of course 3 to accompany course 2. † *Four hours a week.* Spring semester.

6. ADVANCED INORGANIC CHEMISTRY.—A continuation of course 5. *Three hours a week.* Spring semester.

7. ORGANIC CHEMISTRY.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory work. The text followed is Holleman's Text-book of Organic Chemistry. Orndorff's Laboratory Manual is used for the experimental work. Course 14 must precede this course. *Three hours class room and † four hours laboratory work a week.* Spring semester.

8. Organic Chemistry.—A continuation of course 7. The work is chiefly in the aromatic series. *Three hours a week.* Fall semester.

(In the fall semester of 1910-1911 course 7 will be given as described in the 1908-1909 catalog and in the spring semester course 8 as described in the 1908-1909 catalog and course 7 as described just above.)

9. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils and the common coals. † *Four hours a week.* Fall semester.

12. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. † *Six hours a week.* Fall semester.

13. Descriptive Mineralogy.—The text-book is Moses and Parson's Elements of Mineralogy. † *Three hours a week.* Spring semester.

14. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. † *Six to* † *sixteen hours a week.* Fall semester.

15. Qualitative Analysis.—A continuation of course 14. † *Six hours a week.* Spring semester.

16. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Lincoln and Walton's Exercises in Elementary Quantitative Chemical Analysis. Open to students who have had course 14. † *Ten hours a week.* This course is offered each semester.

18. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravemetric and volumetric methods are used. Open to students who have taken course 16. † *Eight hours a week.* Fall semester.

19. Special Quantitative Methods. Open to students who have completed course 16. (a) Water analysis. (b) Electroanalysis. (c) assaying. (d) Special volumetric analysis. (e) Organic analysis. (f) Toxicology and urinalysis. Each subdivision requires † *four hours a week.* Work under this course is offered each semester.

22. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than* † *ten hours for a semester* for its completion. Spring semester.

23. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. *Three hours a week.* Fall semester.

24a. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Throp's Outlines of Industrial Chemistry. *Two hours a week.* Fall semester.

24b. Industrial Chemistry.—A continuation of course 24a. *Two hours a week.* Spring semester.

25. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed courses 16 and 18. † *Four hours a week.* Offered each semester.

26. Physical-Chemical Methods.—The course will include, determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as the refractometer, polariscope, and spectroscope. † *Six hours a week.* Spring semester.

28. Dyeing.—The practical application of dyes to cotton, wool, and silk. † Fifteen hours a week for two weeks.

29a. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, properties and alloys of iron. *Two hours per week.* Fall semester.

29b. Metallurgy of the Metals other than Iron.—A course similar to 29a. The metals other than iron and steel are studied. *Two hours a week.* Spring semester.

31. Chemical Reactions.—Principles governing chemical reactions; their application to equations; advanced equation writing; oxidation and reduction. The text-book is Prescott and Johnson's Qualitative Analysis. *Two hours a week.* Spring semester.

32a. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures and recitations. † *Two hours a week.* Fall semester.

32b. Physical Chemistry.—A continuation of course 32a. *Three hours a week.* Spring semester.

33. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. *Two hours a week.* Fall semester.

Summer Term (Mr. Burgess)

1. Preparatory Elementary Chemistry, descriptive and experimental, lectures and recitations. Laboratory course covering the work required for entrance to the University.

2. General Inorganic Chemistry, corresponding to work of the freshman year.

3. Advanced courses adapted to the needs of the students registering for them. A Special Teachers' Course will be given, covering methods of teaching chemistry, construction of apparatus, and experimentation, if a sufficient number elect.

CIVIL ENGINEERING

PROFESSOR BOARDMAN; PROFESSOR BROWN; PROFESSOR BEAN; MR. JOHNSTONE; MR. CONNER; MR. MAYO

1a. PLANE SURVEYING.—A course on the general principles of plane surveying; instruments, their adjustments and uses; the variation of the magnetic needle, and the determination of the true north; direct leveling; land survey computations. The text-book used is Breed and Hosmer's The Principles and Practice of Surveying, Vol. I. *Three hours a week. Last twelve weeks.* Fall semester.

1b. PLANE SURVEYING.—A course similar to 1a, given to students in the mechanical and electrical engineering courses. *Two hours a week.* Fall semester.

2a. FIELD WORK IN SURVEYING.—The use of the chain, compass, transit, and level. This course is given before the student has received class room instruction, and is designed to make him familiar with the uses of the instruments, such as running lines, turning angles, reading verniers and rods, etc. * *Six hours a week. First six weeks.* Fall semester.

2b. PLOTTING.—This course consists chiefly of map drawing from field notes, by the different methods in common use. * *Four hours a week. First twelve weeks.* Spring semester.

2c. FIELD WORK IN SURVEYING.—A continuation of course 2a. This course consists of original surveys, problem work, adjustment of instruments, note keeping, etc. The text-book used is Pence and Ketchum's Surveying Manual. * *Six hours a week. Last six weeks.* Spring semester.

3a. RAILROAD CURVES.—The theory of railroad curves, switches and turnouts. The text-book used is Allen's Railroad Curves and Earthwork, together with Field and Office Tables, by the same author. *Three hours a week. First twelve weeks.* Spring semester.

3b. EARTHWORK.—A continuation of course 3a on the methods of setting slope stakes and of calculating earthwork. *Three hours a week. First six weeks.* Fall semester.

4a. RAILROAD FIELD WORK.—This course consists of practice in running in railroad curves. A general application of the theories of course 3a. † *Six hours a week. Last six weeks.* Spring semester.

4b. RAILROAD FIELD WORK.—The survey of a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. * *Six hours a week. First nine weeks.* Fall semester.

4c. Railroad Office Work.—The office work of mapping the notes taken in course 4b, including the calculation of the earthwork. **Six hours a week. Last nine weeks.* Fall semester.

5. Highway Engineering.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. The construction and maintenance of the different pavements on city streets. Lectures and recitations. The text-book used is Judson's City Roads and Pavements. *Three hours a week. Last twelve weeks.* Fall semester.

6. Drawing.—This course includes topographical drawing, lettering and tracing; stereotomy, giving the application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, abutments, bridge piers, etc. **Six hours a week.* Spring semester.

8. Sanitary Engineering.—Sewerage systems; drainage and sewerage of towns; sewage disposal; sewage treatment; water purification; sanitation and the public health. Required of students electing Option 1. *Two hours a week.* Spring semester.

9a. Advanced Surveying.—This course consists of lectures and readings on the theory of base line measurement, triangulation, precise leveling, topographical surveying, and the use of the plane table, and is a preparation for course 9b. The text-book is Breed and Hosmer's The Principles and Practice of Surveying, Vol. II. *One hour a week.* Spring semester.

9b. Advanced Surveying.—This course consists of the practical application in the field of the principles given in course 9a. The work is given during the two weeks following commencement, and counts as 2-5 credit.

10. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observations; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. The text-book used in this course is Merriman's Treatise on Hydraulics. *Three hours a week.* Spring semester.

11. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter, and various forms of floats. Trips are made to the United States Geological Survey gaging station, located on the Penobscot river between Howland and West Enfield, where discharge measurements are made, where, at this time of year, a discharge of from 4,000 to 10,000 cubic feet per second is usually found. The data thus obtained is used together with that obtained from the Survey to plot the rating curve, etc. The measurements taken are

reported to the Survey. The charge for this course is $5.00. † *Four hours a week.* Fall semester.

12. Structures.—A continuation of course 21. The theory of stresses in framed structures, including the plate girder, bridge trusses, and roof trusses; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.* Fall semester.

13a. Structures.—A continuation of course 12. This course includes a study of the higher types of structures such as drawbridges, cantilever bridges, suspension bridges, arches, and steel buildings. The text-book used is Merriman and Jacoby's Roofs and Bridges. Vol. IV. *Three hours a week.* Spring semester.

13b. Graphic Statics.—This course consists of class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by the graphical method. *Two hours a week.* Spring semester.

14. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. † *Twelve hours a week.* Fall semester.

15. Designing.—A continuation of course 14. † *Six hours a week.* Spring semester.

16. Hydraulic Engineering.—Rainfall, evaporation, and stream flow. The development and utilization of water power. The development of the modern turbine. This course is given by lectures and recitations, the text-books used being Hoyt and Grover's River Discharge, and Merriman's Hydraulics. Required of students electing Option 1. *Two hours a week.* Fall semester.

17. Hydraulic Engineering.—A continuation of course 16. *Two hours a week.* Spring semester.

19. Railroad Engineering.—Lectures and recitations on the methods and materials of railroad construction. Subgrade; roadbed; trestles; culverts; track; street crossings; yards and terminals, signals and interlocking; track work and maintenance. The text-book used is Wilson's "Elements of Railroad Track and Construction." Required of students electing Option 2. *Two hours a week.* Spring semester.

20. Masonry Construction.—A course including the discussion of building stone, cements and their tests, mortar, concrete, piles, foundations, pneumatic caissons, open caissons, bridge piers, and abutments. Reinforced concrete. Lectures and recitations. The text-books used are Baker's Treatise on Masonry Construction and Maurer and Turneaure's Principles of Reinforced Concrete Construction. *Two hours a week.* Fall semester.

21. Structures.—The theory of the simple beam; loads; reactions; vertical shear; shear; bending moment; influence lines. The object of this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, the moment diagram, different tables, and the slide rule. The text-book used is Grover and Boardman's Notes on Beams and Simple Framed Structures. *Two hours a week.* Spring semester.

22. Foundations.—Building stones; manufacture of cement; tests of cement. Mortar; concrete, both plain and reinforced. This is a course of lectures given to students in the mechanical and electrical engineering courses. *One hour a week.* Fall semester.

23. Hydraulics.—A short course which includes the main principles given in course 10. Given to students in the mechanical and electrical engineering courses. The text-book used is the same as that used in course 10. *Two hours a week.* Fall semester.

24. Railroad Engineering.—A map reconnaissance for a railroad about ten to fifteen miles in length, where the theories of course 25 are applied. A profile is made, grades established and drainage areas calculated. Culverts, rails, switch points, frogs, and ties are designed, and the layout of a railroad yard made. Required of students electing Option 2. † *Six hours a week.* Spring semester.

25a. Railroad Engineering.—A course discussing the economics of railroad location and operation. Traffic; operating expenses; the locomotive and its work; distance; grades; curves. The text-book used is Raymond's "Elements of Railroad Engineering." Required of students electing Option 2. *Two hours a week.* Fall semester.

25b. Railroad Engineering.—A continuation of 25a. *One hour a week.* Spring semester.

26. Cement Testing.—This course consists of laboratory work for the purpose of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is given in conjunction with Mechanical Engineering 25, Testing, and is required of students in mechanical engineering in the fall semester and of students in civil engineering in the spring semester. *The time varies.*

ELECTRICAL ENGINEERING

Professor Ganong; Mr. Child; Mr. Cheswell

1a. Elements of Electrical Engineering.—This course traces the development of electrical engineering from the practical application of laws studied in physics. The work is taken up by lectures, text-book,

and problems. Required of juniors in electrical engineering. *Two hours a week.* Fall semester.

1b. Elements of Electrical Engineering.—A continuation of course 1a, showing the application of fundamental principles to the construction of electrical machinery and to general engineering problems. Required of juniors in electrical engineering. *Three hours a week.* Spring semester.

2b. Laboratory Work.—Electrical measurements, and the operation and testing of direct current generators and motors. This course illustrates the practical application of the work given in courses 1a and 1b. Required of juniors in electrical engineering. The charge for this course is $2.00. † *Two hours a week.* Spring semester.

3a. Elements of Alternating Current Circuits.—A study of the conditions which arise in connection with the introduction of variable and alternating electric pressures, and the production of such pressures, measurements and calculations for the same. Required of seniors in electrical engineering. *Three hours a week.* Fall semester.

3b. Alternating Current Machinery.—A continuation of course 3a, taking up the application of the fundamental elements of alternating currents to the design, construction, and operation of apparatus and machinery; the study of polyphase apparatus in the generation, transmission, distribution, and utilization of power. Required of seniors in electrical engineering. *Four hours a week for the first nine weeks.* Spring semester.

4a. Electrical Development.—A course on the design, construction, and cost of electro-magnets and clutches, electric heating apparatus, direct current generators and motors, and the general features of the design of alternating current machinery. The study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in electrical engineering. *Three hours a week.* Fall semester.

4b. Reference Work.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and he presents the results of such investigation to the class. Also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in electrical engineering. *One hour a week.* Spring semester.

5a. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in course 4a. Calculations are made for electro-magnetic devices, and for direct cur-

rent generators, involving a knowledge of the fundamental electrical principles of design, the principles of mechanical design, cost of materials and cost of labor, and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in electrical engineering. † *Four hours a week.* Fall semester.

5b. Design of Direct and Alternating Current Machinery.—A continuation of course 5a. Drawing room work. Required of seniors in electrical engineering. † *Four hours a week for thirteen weeks.* Spring semester.

6a. Laboratory Work.—A continuation of course 2b, taking up the testing of direct current apparatus and machinery, and alternating current measurements; investigation of power plant equipments and electric lighting. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

6b. Laboratory Work.—A course showing the practical application of the work done in courses 3a and 3b, and continuing the laboratory work of course 6a, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Spring semester.

7b. Electrical Engineering.—A course in general engineering applications and practical problems, such as will be met with after the student leaves college, applying all the work and training of the course and the technical ability of the student. Required of seniors in electrical engineering. *Four hours a week, last nine weeks.* Spring semester.

8b. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus and development of original ideas of the student; also for testing, repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in electrical engineering. *Sixty-four hours during the senior year.*

9a. Thesis Work.—The designing of electrical apparatus or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in electrical engineering. *Fall semester and through the senior year, as arranged.*

13b. Electric Railway Engineering.—A study of the preliminary steps taken in electric railway engineering. The selection of the proper

motor equipment for a given class of service. Car, bond, and transmission testing. An elective course open to seniors in electrical engineering. *Two hours a week.* Spring semester.

10a. Electrical Development and Application.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of seniors in mechanical engineering. *Three hours a week.* Fall semester.

10b. Alternating Current Development and Application.—An elective course for seniors in mechanical engineering, which continues the work taken up in course 10a. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from a mechanical engineer's point of view. *Two hours a week.* Spring semester.

11a. Laboratory Work.—For mechanical engineers. Electrical measurements, and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in course 10a, and the work is arranged for the particular needs of the mechanical engineer. This course is open to chemical and civil engineering students who have previously elected one of the preliminary electrical courses. This course may be followed by the regular courses 6a and 6b, by those wishing to become familiar with alternating current machinery. Required of seniors in mechanical engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

12b. Electrical Transmission and Distribution of Power.—An elective course for seniors in civil engineering, taking up the elements of electrical measurement, the generation, transmission, and utilization of power, covering the electrical feature of water power development. *Two hours a week.* Spring semester.

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences.

MECHANICAL ENGINEERING

Professor Jewett; Professor Curtis; Mr. Davee; Mr. Carter; Mr. Cheswell

1a. Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern woodworking practice, and also teach him to work from dimensioned drawings. These exercises lead up to pattern-making. The pattern

work consists of making complete patterns and core boxes from drawings. Required of students in mechanical engineering. Charge for materials, $4.00. * *Six hours a week.* Fall semester.

1b. Woodworking.—A shorter course than 1a, arranged for students in electrical engineering. Required. Charge for materials, $4.00. * *Four hours a week.* Fall semester.

2. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in mechanical and electrical engineering. Charge for material, $5.00. Cost of hammer, calipers and scale, about $2.50. * *Four hours a week.* Spring semester.

3. Kinematical Drawing.—This course supplements 4. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in mechanical engineering. * *Four hours a week.* Fall semester.

4. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. The text-book is Schwamb and Merrill's Elements of Mechanism. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

5a. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Required of students in mechanical engineering. Charge for materials, $5.00. * *Six hours a week.* Fall and spring semesters.

5b. Machine Work.—A shorter course than 5a and 5b, required of students in electrical engineering. Charge for material $5.00. * *Four hours a week.* Fall and spring semesters.

6. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with course 5, ten per cent. of the hours registered for under course 5 being applied to foundry work.

7. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanisms. The Zeuner, Bilgram, and other valve-diagrams are made use of in this connection. Practical problems are solved in the drawing room. Required of students in mechanical engineering. *Two hours a week.* Spring semester.

8. Machine Design.—A study of the designing of machines, involving the selection of materials, proportioning of parts for strength and rigidity, etc. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

9. Materials of Engineering.—Properties of the metals, timber, hemp rope, etc. Protective coatings and preservatives. Required of students in mechanical engineering. *Two hours a week.* Fall semester.

10. Elementary Steam Engineering.—Types and details of steam boilers and engines and auxiliary machinery. A consideration of fuels and the chemistry of combustion. The use of the steam engine indicator. Required of students in mechanical and electrical engineering. *Two hours a week.* Spring semester.

11. Thermodynamics.—The fundamental theories relating to the steam engine and other heat engines. Steam calorimeters, injectors, compressors and refrigerating machinery included. Required of students in mechanical and electrical engineering. Course 15 is a prerequisite. *Three hours a week.* Fall semester.

12. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room. Required of students in mechanical engineering. * *Six hours a week.* Fall semester.

13. Hydraulic Machinery.—A study of the various forms of machinery used with hydraulic power, either in its development or its application. Required of students in mechanical engineering. Civil Engineering 23 is a prerequisite for this course. *Two hours a week.* Spring semester.

15a. Mechanical Laboratory.—The calibration of instruments used in engineering testing followed by the more elementary experimental work. Required of juniors in mechanical engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

15b. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, etc. Required of Seniors in mechanical engineering. The charge for the course is $2.00. † *Two hours a week.* Fall semester.

15c. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in mechanical engineering. The charge for the course is $2.00. † *Four hours a week.* Spring semester.

16. Steam Engineering.—A continuation of courses 10 and 11, indicating the connection between theory and practice in steam engines, steam turbines, air compressors, refrigerating machines, and gas engines. Considerations affecting the design and efficiency of operation of heat motors. Required of students in mechanical engineering. *Two hours a week.* Spring semester.

17. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general

machine design. A steam engine is partially designed in the drawing room. Required of students in mechanical engineering. * *Six hours a week.* Spring semester.

18. Machine Design.—A continuation of course 8, including the execution of the design of some typical machines. Required of students in mechanical engineering. * *Six hours a week.* Fall semester.

19. Machine Drawing.—Instruction in modern drafting-room methods, shop terms, etc. The practical application of drawing to use in the construction of machines. Required of students in mechanical engineering. * *Four hours a week.* Spring semester.

20. Heating and Ventilation.—A lecture course. Required of students in mechanical engineering. *One hour a week.* Spring semester.

21. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.* Fall and spring semesters.

22. Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

24. Mechanism of Machines.—Lectures supplementing course 4. Required of students in mechanical engineering. *One hour a week.* Fall semester.

25. Strength of Materials by Test.—A course in the mechanical laboratory for students in civil engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

26. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the student in electrical engineering. Required. The charge for the course is $2.00. † *Three hours a week.* Fall semester.

MECHANICS AND DRAWING

Professor Weston; Professor Grover; Mr. Farnham

1. Drawing.—Instruction and practise in technical free-hand drawing and lettering, in the care of drawing instruments and their use in elementary problems involving straight lines and circles. The text-book is Anthony's Mechanical Drawing. * *Six hours a week.* Fall semester.

2. Mechanical Drawing.—The study and construction of geometrical problems, conic sections, and problems in projection, followed by practise in the conventional methods of representing surfaces and materials by means of section lines. The text-book is Anthony's Mechanical Drawing. * *Six hours a week.* Spring semester.

3. Drawing.—The elementary principles and problems of descriptive geometry including intersections and developments. * *Six hours a week.* Fall semester.

4. Drawing.—A continued study of the methods of projections including isometric projection, cabinet projection, and linear perspective; followed by instruction and practise in mechanical lettering, the design of titles, of working drawings, and the making of tracings and blue-prints. * *Six hours a week.* Spring semester.

5. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curve; torsional stresses and theories of stress in long columns. The text-books are Maurer's Technical Mechanics, Hancock's Applied Mechanics, and Merriman's Mechanics of Materials. *Five hours a week.* Fall semester.

6. Mechanics.—A continuation of course 5. *Five hours a week.* Spring semester.

7. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function, with applications to problems in gravitation, hydromechanics, etc. *Two hours a week.* Fall semester.

8. Advanced Mechanics.—A continuation of course 7. *Three hours a week.* Spring semester.

10. Free-hand Drawing.—Free-hand pencil practise in the drawing of designs involving straight lines and curves, in lettering, in model drawing, and in pictorial perspective. A general course designed for non-engineering students. * *Six hours a week.* Fall semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 177.

PHYSICAL TRAINING

The courses in this department are described on page 178.

PHYSICS

The courses in this department are described under the College of Arts and Sciences.

COLLEGE OF PHARMACY

FACULTY OF INSTRUCTION

GEORGE EMORY FELLOWS, Ph. D., L. H. D., LL. D.
President of the University

JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy and Dean of the University

LUCIUS HERBERT MERRILL, B. S., Sc. D.
Professor of Biological and Agricultural Chemistry

FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science

JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*

GILMAN ARTHUR DREW, Ph. D. *Professor of Biology*

WILBUR FISK JACKMAN, B. S., Ph. C. *Professor of Pharmacy*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, Ph. D.
Professor of Romance Languages

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, Ph. D. *Professor of Chemistry*

GUY ANDREW THOMPSON, M. A. *Professor of English*

MINTIN ASBURY CHRYSLER, Ph. D.
Associate Professor of Botany

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

CHARLES WILSON EASLEY, Ph. D.
Associate Professor of Chemistry

ANDREW PAUL RAGGIO, Ph. D.
Assistant Professor of Romance Languages

*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics

LEON ELMER WOODMAN, M. A. *Assistant Professor of Physics*

WINDSOR PRATT DAGGETT, Ph. B.
Professor of Public Speaking

*Absent on leave.

CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English

WALTER EVERETT PRINCE, M. A.	*Instructor in English*
WILLIS FLYE WASHBURN, B. S.	*Instructor in Chemistry*
LOWELL JACOB REED, B. S.	*Instructor in Mathematics*
GEORGE EDWARD PEARSON, M. A.	*Instructor in English*
HARRY NEWTON CONSER, M. S., M. A.	*Instructor in Botany*
BERTRAND FRENCH BRANN, B. S.	*Instructor in Chemistry*
GEORGE ALVIN SCOTT, B. S. in E. E.	*Instructor in Physics*
BENJAMIN ENGLE KRAYBILL, Ph. B.	*Instructor in Industrial Chemistry*
SHERMAN DANIEL CHAMBERS, B. S.	*Instructor in Mathematics*
TRUMAN LEIGH HAMLIN, M. A.	*Instructor in Mathematics*
WALTER EDMOND WILBUR, B. S.	*Instructor in Mathematics*
ALICE MIDDLETON BORING, A. M.	*Instructor in Zöology*
ERNEST CLAUDE DREW, B. S.	*Tutor in Physics*

GENERAL INFORMATION

The College of Pharmacy Comprises:
The Pharmacy Course
The Short Course in Pharmacy

The Pharmacy Course

This course is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and a thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, as is offered in other college courses. Thirty credits are required for graduation.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this course. The growing importance of the biological, sanitary, and medical sciences, and the pharmacist's relation to them, make it increasingly necessary to his success that he be not only a well trained man in the technical branches but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy, and the best chemical and pharmaceutical journals.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
French 3a	3	French 3b	2
English 1a	1	English 1b	1
English 3	3	English 4	3
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †2	1	Chemistry 4, †2	1
Mathematics 2, 4	5	Mathematics 1, 2	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	16 2-3		16 2-3

Sophomore Year

French 4a	3	French 4b	3
Physics 12	5	Physics 5, *5	2
English 2a	1	English 2b	1
Chemistry 5	2	Chemistry 6	3
Chemistry 14, †8	4	Chemistry 15, †8	4
Biology 1	3	Botany 1	4
Zoölogy 4	2	Elective	1
Military 1, *3	1	Military 1, *3	1
	21		19

Junior Year

Chemistry 7	3	Chemistry 8	2
Chemistry 16, †8	4	Chemistry 19, †12	6
Biological Chemistry 1	5	Chemistry 21, †2	1
Botany 3	4	Chemistry 31	2
Pharmacy 5	2	Bacteriology 1, †6	3
Elective	2	Pharmacy 6	4
	20	Elective	2
			20

SENIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Pharmacy 2	5	Pharmacy 4	5
Pharmacy 3, † 12	6	Pharmacy 9, † 5	2 1-2
Pharmacy 7	3	Pharmacy 10, † 10	5
Elective	4	Pharmacy 11	3
		Elective	4
	18		19 1-2

From courses in History, Philosophy, and Economics a total of at least five hours must be chosen.

The number of hours required and elected need not exceed 150, or 30 credits.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Short Course in Pharmacy

This course of two years, is designed for those who, for lack of time or for other reasons, are unable to take the course of four years. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The course corresponds, in general, to the usual full course of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this course does not warrant extending to other than advanced students the privilege of electives.

Requirements for Graduation

FRESHMAN YEAR

Chemistry 1	2	Chemistry 2	3
Chemistry 14, † 16	8	Chemistry 15, 19, † 10	5
Pharmacy 1	5	Chemistry 31	2
Pharmacy 5	2	Botany 6	3
		Pharmacy 6	4
	17		17

SOPHOMORE YEAR

Fall Semester		*Spring Semester*		
Subject	Hours	Subject	Hours	
Chemistry 7	3	Chemistry 8	2	
Botany 7	3	Chemistry 21, † 2	1	
Pharmacy 2	5	Pharmacy 4	5	
Pharmacy 3, † 12	6	Pharmacy 9, † 3	1	1-2
Pharmacy 7	3	Pharmacy 10, † 10	5	
		Pharmacy 11	3	
	20	Bacteriology 1, † 6	3	
			20	1-2

Students who complete this course in a satisfactory manner receive the degree of Pharmaceutical Chemist.

DEPARTMENTS OF INSTRUCTION

BOTANY

The courses in this department are described under the College of Arts and Sciences.

CHEMISTRY

The courses in this department are described under the College of Technology.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 177.

PHARMACY

Professor Jackman

1. Pharmaceutical Chemistry.—Chemical formulæ; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. The text-books is Prescott and Johnson's Qualitative Chemical Analysis. *Five hours a week.* Fall semester.

2. Pharmacy.—Pharmacopœias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; pharmaceutical arithmetic and problems; the chemical elements, official salts, their preparations; organic compounds, their official preparations; official drugs, their preparations; animal preparations; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall semester.

3. Laboratory Pharmacy.—Official and National Formulary preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, and other galenicals; official tests of chemicals, drugs, and preparations, for identity, strength and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. † *Twelve hours a week.* Fall semester.

4. Pharmacopœia.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring semester.

5. Inorganic Pharmacognosy.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall semester.

6. Organic Pharmacognosy.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Culbreth's Materia Medica. *Four hours a week.* Spring semester.

7. Materia Medica.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall semester.

9. Pharmacy Readings.—Current pharmacy literature; research and reference readings; abstracting; reports. † *Three or five hours a week.* Spring semester.

10. Laboratory Pharmacy.—A continuation of course 3. † *Ten hours a week.* Spring semester.

11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to principles and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc. The text-book is Ruddiman's Incompatibilities in Prescriptions. *Three hours a week.* Spring semester.

PHYSICAL TRAINING

The courses in this department are described on page 178.

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all students with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

PROFESSOR VARNUM

1. MILITARY, FIRST YEAR'S COURSE.
   (a) PRACTICAL:
      1—U. S. Infantry Drill Regulations to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.
      2—Infantry Target Practice.
      3—Field Service Regulations.
      4—Guard Duty.
   (b) THEORETICAL:
      1—U. S. Inantry Drill Regulations to include the School of the Company.
      2—Manual of Guard Duty.
      3—Field Service Regulations.
      4—Small Arms Firing Regulations.

   Required of all students, except as provided on p. 38. *Three hours, or the equivalent, a week for the freshman year, counting one credit.*
2. MILITARY, SECOND YEAR'S COURSE.
   (a) PRACTICAL:
      The same as course 1 (a).
   (b) THEORETICAL:
      1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.
      2—Records and Official Papers.
      3—Small Arms Firing Regulations.
      4—Field Service Regulations.

   Open to all who have completed course 1. All will be non-commissioned officers. *Three hours, or the equivalent, a week for the sophomore year, counting one credit.*
3. MILITARY, THIRD YEAR'S COURSE.
   (a) PRACTICAL:
      Duties consistent with rank in carrying out (a) in courses 1 and 2.
   (b) THEORETICAL:
      Assistant instructors over those taking course 1 (b).

Open to all who have completed course 2. All will be officers, or non-commissioned officers. *Five hours, or the equivalent, a week, counting one credit.*

4. Military, Fourth Year's Course.

(a) Practical:

The same as for course 3 (a).

(b) Theoretical:

Assistant instructors over those taking course 2 (b).

Open to all who have completed course 3. All will be officers. *Five hours, or the equivalent, a week, counting one credit.*

PHYSICAL TRAINING

Professor Grover (*Acting Instructor*)

1. Physical Training.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movements; elementary dumb-bell, wand, and apparatus exercises. * *Two hours a week.* Fall semester.

2. Physical Training.—Intermediate and advanced class exercises and combination apparatus work. * *Two hours a week.* Spring semester.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

GEORGE EMORY FELLOWS, PH. D., L. H. D., LL. D.
President of the University
WILLIAM EMANUEL WALZ, M. A., LL. B.
Dean and Professor of Law
EDGAR MYRICK SIMPSON, B. A.
Assistant Professor of Real Property and Evidence
GEORGE HENRY WORSTER, LL. M. *Instructor in Law*
BARTLETT BROOKS, B. A., LL. B.
Instructor in Contracts and Negotiable Paper
FOREST JOHN MARTIN, LL. B.
Resident Lecturer on Common Law Pleading and Maine Practice

Resident Lecturer on Equity Pleading and Practice
CHARLES HAMLIN, M. A., LL. D.
Lecturer on Bankruptcy and Federal Procedure
LUCILIUS ALONZO EMERY, M. A., LL. D.
Lecturer on Roman Law and Probate Law
LOUIS CARVER SOUTHARD, LL. D.
.. *Lecturer on Medico-Legal Relations*
EDWARD HARWARD BLAKE, LL. B. *Lecturer on Admiralty Law*
RALPH KNEELAND JONES, B. S. *Librarian*
LEIGH IRVING HARVEY *Stenographer*

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies since the beginning of 1908 the entire sixth story of the Exchange building, at the corner of State and Exchange streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains about 3,000 volumes, including the reports of the Supreme Court of the United States, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common

Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the Complete Reporter System, the Century Digest, the Lawyers' Reports Annotated, all the Law Encyclopædias, and a considerable number of text-books, as also the English Reports, full verbatim reprint.

Admission

Graduates of any college or satisfactory preparatory school are admitted to the college as candidates for the degree of Bachelor of Laws without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case according to the rules of the Association of American Law Schools. Attention is called to a change made in these rules by the Association of American Law Schools at its meeting at Narragansett Pier, R. I., in August, 1905. The following resolution was then passed:

"Section one of Article VI of the Articles of Association shall be amended so that it will read as follows:

"I. It shall require of all candidates for its degree at the time of their admission to the school the completion of a four years' high school course, or such a course of preparation as would be accepted for admission to the state university, or to the principal colleges and universities in the state where the law school is located; provided, that this requirement shall not take effect until September, 1907."

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other schools which are members of the Association of American Law Schools, are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices otherwise qualified are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, while graduate students may take one of the two courses leading to the degree of Master of Laws.

Methods of Instruction

The College is not committed exclusively to any one method of instruction, and recognizes the great value of lectures by able men and the profit to be found in the use of standard text-books; but the greatest

stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle," may, perhaps, adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the college, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorities cited, are submitted to the presiding judge.

The aim and spirit of the college are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Course of Study

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. It is believed that expenses in this department, as well as in other departments of the University, are lower than in any other New England college.

Degrees

At the completion of the three years' course the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the course leading to the master's degree.

COURSES OF INSTRUCTION

1a. Agency.—Text-book, Huffcut's cases on Agency. *Three hours a week.* Spring term. Mr. Worster.

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Bankruptcy.—Lectures. *Two hours a week.* Winter term. General Hamlin.

3. Carriers.—Text-book. McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

4. Carriers.—A continuation of course 3. *Three hours a week.* Winter term. Professor Simpson.

5. Common Law Pleading.—Lectures. *Two hours a week.* Winter term. Mr. Martin.

6. Common Law Pleading.—A continuation of course 5. *One hour a week.* Spring term. Mr. Martin.

7. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

8. Constitutional Law.—Boyd's Cases. *Two hours a week.* Spring term. Mr. Worster.

9. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Mr. Brooks.

10. Contracts.—A continuation of course 9. *Three hours a week.* Winter term. Mr. Brooks.

11. Contracts.—A continuation of course 10. *Two hours a week.* Spring term. Mr. Brooks.

12. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

13. Criminal Law.—A continuation of course 12. *Three hours a week.* Spring term. Professor Simpson.

14. Damages.—Beale's Cases on Damages. *Three hours a week.* Winter term. Mr. Worster.

15. Domestic Relations.—Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

16. Equity Jurisprudence.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz.

17. Equity Jurisprudence.—A continuation of course 16. *Three hours a week.* Winter term. Professor Walz.

18. Equity Pleading.—Lectures. *Two hours a week.* Winter term. Mr. ————

19. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

20. Evidence.—A continuation of course 19. *Three hours a week.* Winter term. Professor Simpson.

21. Evidence.—Lectures. *Number of hours not fixed.* Winter term. Mr. ————

22. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

23. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

24. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

25. General Review.—Gardner's Review. *One hour a week.* Winter term. Professor Walz.

26. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

27. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

28. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Mr. Worster.

29. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

30. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Martin.

31. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

32. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

33. Negotiable Paper.—Huffcut's Cases. *Two hours a week.* Winter term. Mr. Brooks.

34. Negotiable Paper.—A continuation of course 33. *Three hours a week.* Spring term. Mr. Brooks.

35. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

36. Private Corporations.—Smith's Cases. *Four hours a week.* Fall term. Mr. Worster.

37. Private Corporations.—A continuation of course 36. *Three hours a week.* Winter term. Mr. Worster.

38. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

39. Real Property.—Tiedeman on Real Property. *Four hours a week.* Fall term. Professor Simpson.

40. Real Property.—A continuation of course 39. *Three hours a week.* Winter term. Professor Simpson.

41. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

42. Roman Law.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

43. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Mr. Worster.

44. Sales.—A continuation of course 43. *Two hours a week.* Winter term. Mr. Worster.

45. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Mr. Worster.

46. Suretyship.—A continuation of course 45. *Two hours a week.* Winter term. Mr. Worster.

47. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

48. Torts.—A continuation of course 47. *Three hours a week.* Winter term. Professor Walz.

49. Torts.—A continuation of course 48. *Two hours a week.* Spring term. Professor Walz.

50. What to do in Court.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

51. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Mr. Worster.

THE MAINE AGRICULTURAL EXPERIMENT STATION

FACULTY OF INVESTIGATION

GEORGE EMORY FELLOWS, Ph. D., L. H. D., LL. D.
President of the University

THE STATION STAFF.

ADMINISTRATION	CHARLES D. WOODS, Sc. D	*Director*
	HARRY M. WOODS, A. B.	*Asst. to the Director*
	BLANCHE F. POOLER	*Stenographer*
	RALPH K. JONES, B. S.	*Librarian*
	CHARLES J. DUNN	*Treasurer*
	GRACE M. COLBURN	*Bookkeeper*
BIOLOGY	RAYMOND PEARL, Ph. D	*Biologist*
	FRANK M. SURFACE, Ph. D.	*Associate*
	MAYNIE R. CURTIS, A. M	*Assistant*
	WALTER ANDERSON.	*Poultryman*
	LOTTIE E. McPHETERS.	*Computer*
CHEMISTRY	JAMES M. BARTLETT, M. S.	*Chemist*
	HERMAN H. HANSON, M. S.	*Associate*
	JOSEPH F. MERRILL, B. S.	*Assistant*
	ALBERT G. DURGIN, M. S.	*Assistant*
ENTOMOLOGY	EDITH M. PATCH, B. S.	*Entomologist*
	OSKAR A. JOHANNSEN, Ph. D	*Associate*
	ALICE W. AVERILL	*Laboratory Assistant*
HORTICULTURE	WALTER W. BONNS, B. S.	*Associate*
PLANT PATHOLOGY	WARNER J. MORSE, M. S	*Pathologist*
	CHARLES E. LEWIS, Ph. D.	*Associate*
	JOHN SUMMERS	*Laboratory Assistant*
HIGHMOOR FARM	WELLINGTON SINCLAIR	*Superintendent*
ROYDEN L. HAMMOND		*Seed Analyst and Photographer*
HENRY A. MILLETT		*Meteorological Observer and Janitor*

ESTABLISHMENT OF THE STATION

The Maine Fertilizer Control and Agricultural Experiment Station, established by Act of the Legislature approved March 3, 1885, began its work in April of that year in quarters furnished by the College. After the Station had existed for two years, Congress passed what is known as the Hatch Act, establishing agricultural experiment stations in every state. This grant was accepted by the Maine Legislature by an Act approved March 16, 1887, which established the Maine Agricultural Experiment Station as a department of the University. The reorganization was effected in June, 1887, but work was not begun until February 16, 1888. In 1906 Congress passed the Adams Act for the further endowment of the stations established under the Hatch Act.

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 7) composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, and the State Dairyman's Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station, and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1909-1910 is about $43,500; $15,000 of which comes from the Hatch fund; $13,000 from the Adams fund; $9,000 from State appropriations for feeding stuff inspection, fertilizer inspection, food and drug inspection and seed inspection; $4,500 from State appropriation for printing; $1,000 from the United States Department of Agriculture for carrying on coöperative experiments with poultry; and about $1,000 from miscellaneous sources.

THE OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at

their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Experiment Station can undertake from the Adams Act fund is more restricted and can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 26. The Station is well equipped in laboratories and apparatus, particularly in the lines of chemical, entomological, horticultural, pomological, vegetable pathological, and poultry investigations. Its poultry plant is probably the most complete of that of any experiment station in the country. It has extensive collections illustrating the botany and entomology of the state. It has a library of about 3,000 volumes, chiefly agricultural and biological journals, and publications of the various experiment stations.

By act of Legislature, 1909, $10,000 was appropriated by the State for the purchase of a farm for experimental work by the Station in orcharding, corn, and other field experiments. The farm selected is in Monmouth. It contains 225 acres and is well provided with buildings and apple orchards.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work

in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, orchard and field experiments, poultry investigations, and entomological research. Some of these are in co-operation with bureaus of the United States Department of Agriculture. Field experiments with crops and orchards are carried on, in the parts of the State where the crop in question is a leading industry on private land in co-operation with the owners.

INSPECTIONS

The inspection of food and drugs, the inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, the inspection of agricultural seeds, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters. The cost of the fertilizer inspection is borne by a brand tax, that of the feeding stuff, food and drugs, and seed inspections by a State appropriation, and that of chemical glassware by a charge for calibration.

DISSEMINATION OF INFORMATION

The Station publishes the account of its work in bulletin form. The bulletins for a year form a volume of about 250 pages and make up the annual report. Bulletins which contain matter of immediate value to practical agriculture are sent free of cost to the entire mailing list of the Station. On request, the name of any resident of Maine will be placed on the mailing list.

Newspaper bulletins on special topics are published from time to time as occasion demands. These are very generally printed by the press of the State and the agricultural papers of the country.

PUBLICATIONS

The Station issues three series of publications: Bulletins; Official Inspections and Miscellaneous Publications.

The results of the work of investigation are printed as Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent to farmers whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars and similar fleeting publications. From 20 to 30 are published each year and are sent to different addresses according to the nature of the subject matter.

On request the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

COMMENCEMENT

The Commencement exercises of 1909 were as follows:

Sunday, June 6: Baccalaureate Address, by Reverend Smith Baker, D. D., of Portland.

Monday, June 7: University Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day exercises; President's Reception.

Tuesday, June 8: Receptions by the various fraternities; Alumni Luncheon; Alumnæ Luncheon; Phi Kappa Phi Initiation.

Wednesday, June 9: Commencement Address by Professor Bliss Perry, L. H. D., LL. D., of Harvard University; Commencement Dinner; Business Meeting of the Alumni Association; Commencement Ball.

DEGREES CONFERRED

College of Agriculture

George Thomas Carlisle, Jr., B. S. in Forestry.....North Edgecomb
Bernard Albert Chandler, B. S. in Forestry.....New Gloucester
Winfield Alfred Kimball, B. S. in Forestry.....Norway
Edward Watts Morton, B. S. in Agriculture.....Kennebunk
Lewis Freeman Pike, B. S. in Forestry.....Milton, N. H.
Benjamin Lewis Roberts, B. S. in Forestry.....Bangor
Thomas Franklin Shatney, B. S. in Forestry.....Orono
Harry Woodbury Smith, B. S. in Agriculture.....Sangerville
Everett Frost Southwick, B. S. in Agriculture.....Peabody, Mass.

College of Arts and Sciences

DaCosta FitzMaurice Bennet, B. A. (Economics).....Lubec
Edgar Frederick Callahan, B. A. (Education).....Orono
Florence Polleys Chase, B. A. (Romance Languages).....Baring
Mary Ella Chase, B. A. (History).....Bluehill
Cecil C. Farrar, B. A. (Latin).....Guilford
Frederick William Foote, B. A. (Philosophy).....Milbridge

Joe Warren Gerrity, B. S. (Economics).....Bangor
William Henry Gilbert, B. A. (Economics)....South Glastonbury, Conn.
Merton Taylor Goodrich, B. S. (Mathematics).....Bingham
Willis Nathan Haines, B. A. (Romance Languages).....Dexter
Mattie Grover Knight, B. S. (Biology).....Deer Isle
Chase McArthur, B. S. (Germanic Languages).....Milltown
George Valentine Nauman, B. S. (Economics).....Portland
Frederick Palladino, B. A. (Philosophy) [Ph. B., Taylor University, 1897].....Bangor
Irene Clara Richardson, B. A. (Romance Languages).....Old Town
Kenneth Albert Rollins, B. A. (Economics).....Farmington
Christine Myrtle Shaw, B. A. (Latin).....Orono
Cora May Shaw, B. A. (Mathematics).....Orono
Dexter Southworth Johnson Smith, B. S. (Economics).....Bangor
Harry Edward Sutton, B. S. (History).....Orono
George Roy Sweetser, B. S. (Economics).....Hampden
Deane Stanley Thomas, B. S. (Economics).....Yarmouthville
James Woodbury Tripp, B. A. (Philosophy).....Orrington
Francis George Wadsworth, B. S. (Education).....Sanford
Dwight Woodbury, B. S. (Mathematics).....Beverly, Mass.
Harry Morgan Woods, B. A. (Mathematics).....Orono

College of Pharmacy

Edward Earle Gardner, B. S. in Pharmacy.....East Machias
Lester Alonzo Barker, Ph. C.....Island Falls
Orrin Linwood Miller, Ph. C.....Carmel
Roy Edward Mann, Ph. C.....Van Buren
Howard Newton Sewall, Ph. C.....York Village

College of Technology

William Milgate Black, B. S. in Civil Engineering.....Belfast
Harold Melville Bowman, B. S. in Mechanical Engineering
Salmon Falls, N. H.
Bertrand French Brann, B. S. in Chemistry.....Bangor
Warren Alfred Carter, B. S. in Chemistry.....Nobleboro
Warren Edward Conner, B. S. in Civil Engineering.....Auburn
Freston Llewellyn Corson, B. S. in Electrical Engineering.....Wilton
Frederick Sutherland Cram, B. S. in Civil Engineering.....Brunswick
Cyrus Hersey Davis, B. S. in Electrical Engineering.....Woodfords
George Percy Deering, B. S. in Civil Engineering.....Winslow's Mills
Harold Frederick Eddy, B. S. in Electrical Engineering.....Bangor

Walter Lee Emerson, B. S. in Civil Engineering.....Lewiston
Chester Arthur Estey, B. S. in Electrical Engineering.....Lisbon Falls
Howard Lovering Farwell, B. S. in Mechanical Engineering
Dorchester, Mass.
Edward Joseph Finnigan, B. S. in Civil Engineering.....Bangor
William Andrew Fogler, B. S. in Electrical Engineering..West Rockport
Harold Daniel Haggett, B. S. in Civil Engineering.....Bath
Earle Wilmer Hall, B. S. in Electrical Engineering.....Farmington
Philip Winthrop Ham, B. S. in Civil Engineering.....Livermore Falls
Walter Ora Harvey, B. S. in Mechanical Engineering.....Kenduskeag
Ralph Morton Henry, B. S. in Electrical Engineering..Cumberland Mills
Harrison Parker Higgins, B. S. in Mechanical Engineering
Somerville, Mass.
Carl Russell Holton, B. S. in Civil Engineering.....Boothbay Harbor
Ralph Lysander Jackson, B. S. in Civil Engineering.....Jefferson
Howard Rich Johnson, B. S. in Electrical Engineering..South Portland
Edmund Bernard Keating, B. S. in Civil Engineering.....Salem, Mass.
Frederick Daniel Knight, B. S. in Electrical Engineering....Limerick
Joseph Philip Littlefield, B. S. in Electrical Engineering....Ogunquit
Joseph Walter McElroy, B. S. in Mechanical Engineering
Manchester, N. H.
Daniel Wallace MacLean, B. S. in Electrical Engineering.....Eastport
Jesse Ham Mason, B. S. in Chemistry.....Beverly, Mass.
Norman Haskell Mayo, B. S. in Civil Engineering.....Bluehill
Merle Eli Merriman, B. S. in Mechanical Engineering.....Portland
Harold Redmere Miller, B. S. in Electrical Engineering..South Berwick
Percy Patrick Mooney, B. S. in Electrical Engineering.....Bangor
Irving Hartwell Moore, B. S. in Electrical Engineering.....Readfield
Harry Edwin Morrell, B. S. in Civil Engineering.....Lewiston
Robley Howe Morrison, B. S. in Chemistry.....Norway
Henry Leighton Nash, B. S. in Electrical Engineering.....Cherryfield
Arthur Francisco Neal, B. S. in Civil Engineering.....North Berwick
Charles Brooks Paine, B. S. in Civil Engineering.....Eastport
Horace Albion Parker, B. S. in Civil Engineering....Livermore Falls
Alfred Bassett Patterson, B. S. in Mechanical Engineering....Winslow
Herbert Tracey Pettigrew, B. S. in Civil Engineering....East Machias
Howard Grenville Philbrook, B. S., in Electrical Engineering
Shelburne, N. H.
Clinton Alley Plumly, B. S. in Civil Engineering.....Lincoln
Elmer Onsville Pray, B. S. in Civil Engineering.....Kittery
James William Randall, B. S. in Civil Engineering.....Freeport
Harold Arthur Rich, B. S. in Mechanical Engineering.....Bangor

Frank Cummings Richardson, B. S. in Civil Engineering....Jefferson
Reginald Elton Robinson, B. S. in Mechanical Engineering....Oxford
George Lewis Smith, B. S. in Mechanical Engineering.....Long Cove
Wilbur Olin Smith, B. S. in Electrical Engineering....Peabody, Mass.
Thomas Cary Wescott, B. S. in Civil Engineering.....Patten
Guy Ellicott Torrey, B. S. in Civil Engineering.....Deer Isle
Elton LaForrest Towle, B. S. in Mechanical Engineering.....Portland
Harry Alfred White, B. S. in Civil Engineering.....Lynn, Mass.
Guy Herbert Williams, B. S. in Civil Engineering....Manchester, N. H.

College of Law

Albert Edward Andersen, LL. B.....Portland
Hiram John Archer, LL. B.....Boston, Mass.
Edward William Bridgham, LL. B.....Bridgton
Arthur Jean Baptiste Cartier, LL. B.....Biddeford
Harry Robertson Elder, LL. B.....Chicopee Falls, Mass.
Reginald Fitz-Randolph, LL. B.....Boulder, Colo.
William Clayton Fraser, LL. B.....Taunton, Mass.
Thomas Francis Gallagher, LL. B.....Bangor
Harold Isaac Goss, LL. B.....Berwick
Frank Wade Halliday, LL. B. [B. A., M. A., Dartmouth College, 1901, 1903] .....Monmouth
James Francis Kiernan, LL. B.....Wareham, Mass.
Seth May, LL. B.....Auburn
James Blenn Perkins, LL. B., [B. A., Bowdoin College, 1903] Boothbay Harbor
Thomas Andrew Sanders, LL. B.....Sangerville
Cyrus Fremont Small, LL. B.....Caribou
Forrest Belmont Snow, LL. B.....Bluehill
William Marston Weeks, LL. B. [B. D., Yale University, 1896; LL. B. Cumberland University, 1908].....Lebanon, Tenn.

ADVANCED DEGREES

Honorary

Charles Hamlin, LL. D.....Bangor
Prescott Keyes, M. S.....Westbrook
Ora Willis Knight, Sc. D.....Bangor

In Course

Master of Arts

Ethel Godfrey, B. L. [Smith College], 1901 (English).....Bangor
Warren Morse, B. A., 1907 (English).....Brewer
Frances May Pol, B. A. [Smith College], 1906 (English).....Bangor

Master of Science

Robert Edmund Clayton, B. S., 1907 (Chemistry).....Bangor
Jonna Carver Colcord, B. S., 1906 (Chemistry).....Searsport
Albert Guy Durgin, B. S., 1908 (Chemistry).....Orono
Albert William Stevens, B. S. in Electrical Engineering, 1907 (Electrical Engineering) .....Belfast
Willis Flye Washburn, B. S., 1907 (Chemistry).....Orono

Master of Laws

Harry McDonald Nolan, LL. B., 1908.....Haverhill, Mass.

Civil Engineer

Oscar Llewellyn Grover, B. C. E., 1897.....Richmond, Va.
Robert Franklin Olds, B. S. in Civil Engineering, 1906.....Portland
John Herman Quimby, B. S. in Civil Engineering, 1904.New York, N. Y.

Electrical Engineer

Herbert Walter Bachelder, B. S. in Electrical Engineering, 1905
Schenectady, N. Y.

Mechanical Engineer

Caleb Hartwell Johnson, B. S., in Mechanical Engineering, 1906
Nahant, Mass.

CERTIFICATES IN THE SCHOOL COURSE IN AGRICULTURE

Irving Willard Bates.....Biddeford
John Howard Dow.....Castle Hill
Robert Burton Harris.....Portland
Ernest Cousins Leach.....East Eddington
Harry Monroe Look.....Jonesboro

PRIZES AWARDED

The various prizes were awarded as follows:

The Kidder Scholarship to Fred Enoch Fish, Farmington.

The Western Alumni Association Scholarship, to Carrie Luella Woodman, Claremont, N. H.

The New York Alumni Association Scholarship, to Frank Elwyn Southard, Lewiston.

The Junior Exhibition Prize, to Francis George Wadsworth, Sanford.

The Sophomore Declamation Prize, to Harold Grinnell Wood, Hallowell.

The Franklin Danforth Prize, to Ernest Frost Southwick, Peabody, Mass.

The Fittsburg Alumni Association Scholarship, to Walter Scott Merrill, Skowhegan.

The Kennebec County Prize, to Wilbur Olin Smith, Peabody, Mass., and Frederick Daniel Knight, Limerick.

The Pharmacy Prize, to Lester Alonzo Barker, Island Falls.

The Holt Prizes, to William Milgate Black, Belfast, Warren Alfred Carter, Nobleboro, and Harold Redmen Miller, South Berwick.

The Honorable E. B. Winslow Prize, to Albert Whiting Doolittle, Hackensack, N. J.

The Walter Balentine Prize, to Roby Perkins Littlefield, Ogunquit.

The Gilbert M. Gowell Prize, established by Perley Fiske Skofield, '08, to William Ernest Schrumpt, Farmington, and George Newton Warden, Vanceboro.

The Skofield Prizes, to George Jacob Wentworth, Kennebunk, for fruit judging, and to Leonard Ramsdell Hartill, Brunswick, for fruit packing.

The General Hamlin Prize will be awarded at Commencement, 1910.

The Highest Standing obtained by a member of the class of 1909 for the four years' course was made by Bertrand French Brann, Bangor.

APPOINTMENTS

Speakers at the Junior Exhibition, May 19, 1909.

Vaughn Russell Chadbourne, Mattawamkeag; Franklin Williams Petty, Fall River, Mass.; Isaac Maxwell Stover, Orono; Francis George Wadsworth, Sanford.

Speakers at the Sophomore Prize Declamation Contest, December 4, 1908

Frederick Lincoln Chenery, Jr., Wayne; Ralph Benjamin Pond, Bangor; Frank Elwyn Southard, Lewiston; Merton Rogers Sumner, South Paris; Sumner Waite, Portland; Oscar Abel Wakefield, Lisbon; Benjamin Otis Warren, Fryeburg; Harold Grinnell Wood, Hallowell.

Members of the Phi Kappa Phi

Bertrand French Brann, Bangor; Walter Lee Emerson, Lewiston; William Andrew Fogler, West Rockport; Howard Rich Johnson, South Portland; Frederick Daniel Knight, Limerick; James Blenn Perkins, Boothbay Harbor; Harold Arthur Rich, Bangor; Cora May Shaw, Orono; Forrest Belmont Snow; Bluehill; George Roy Sweetser, Hampden; Elton La Forest Towle, Portland; Dwight Woodbury, Beverly, Mass.

Seniors Receiving General Honors

Bertrand French Brann, Bangor; Walter Lee Emerson, Lewiston; William Andrew Fogler, West Rockport; Howard Rich Johnson, South Portland; Frederick Daniel Knight, Limerick; Harold Arthur Rich, Bangor; Cora May Shaw, Orono; Elton La Forest Towle, Portland.

From the College of Law

James Blenn Perkins, Boothbay Harbor; Forrest Belmont Snow, Bluehill.

Reported to the Secretary of War for Publication in the Next United States Army Register as the Most Distinguished Students in the Military Department

Harold Melville Bowman, Salmon Falls, N. H.; George Valentine Nauman, Portland.

OFFICERS OF THE CADET CORPS

Field and Staff

Major—George Edwin Springer
Captain and Adjutant—John Neal Philbrook
Captain and Quartermaster—Fred Everett Wiley
Battalion Quartermaster Sargeant—Cyrus William Murphy, Jr.

Company A.

Captain	George Arthur Wakefield
First Lieutenant	William Rice Ballou
Second Lieutenant	Benjamin Haskell
Second Lieutenant	Graham Brown Spear
First Sergeant	Walter Remick Witham
Quartermaster Sergeant	Sherman Leslie Quimby
Sergeant	William Leroy Fletcher
Sergeant	Morrill Stuart Pope
Sergeant	John Winchester Carey
Corporal	Clifton Edward Chandler
Corporal	Richard Anderson Power

Company B.

Captain	Harold Williams Wright
First Lieutenant	Benjamin Calvin Kent
Second Lieutenant	Henry Wey Chapman
Second Lieutenant	William Hale Sawtelle
First Sergeant	Clifford Henry George
Company Quartermaster Sergeant	Charles Warren Underhill
Sergeant	Forrest Bertram Ames
Sergeant	Elwood Whitney Jennison
Corporal	Carroll Prescott Harrington
Corporal	Royden Henry Harriman
Corporal	Gilbert Gould Sanborn
Corporal	Winfield Wenno Sawyer

COMPANY C.

Captain	Ashton Halsted Hart
First Lieutenant	Harold Clark Faulkner
Second Lieutenant	Robert Clifford Henry Reid
First Sergeant	James Plummer Poole
Company Quartermaster Sergeant	Walter Bradbury Emerson
Sergeant	Enos Boise Lewis
Sergeant	Allen Ernest Sederquest
Sergeant	Harry Ernest Thompson
Corporal	William Hammond Merrill
Corporal	William Johnstone Mitchell
Corporal	Robert Arthur Pinkham
Corporal	Ernest Thompson Savage
Corporal	Edward Gordon Weston

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agriculture, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ce. Civil Engineering, Ds. Domestic Science, Ec. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Hy. History, Lt. Latin, Ms. Mathematics, Me. Mechanical Engineering, Pm. Pharmacy, Pl. Philosophy, Ps. Physics, Rm. Romance Languages.

GRADUATE STUDENTS

Brann, Bertrand, French, B. S., Ch. University of Maine, 1909	*Bangor*	Bangor
Hamlin, Truman Leigh, M. A., Ms. Western Reserve University, 1899 University of Missouri, 1902	*Orono*	Bennoch St.
Kraybill, Benjamin Engle, M. S., Ch. Franklin and Marshal College, 1908	*Harrisburg, Pa.*	Campus
Lorimer, Addison Benjamin, B. A., Eh. Colby College, 1888	*Bangor*	Bangor
Patch, Edith Marion, B. S., Bl. University of Minnesota, 1901	*Orono*	College St.
Reed, Lowell Jacob, B. S., Ms. University of Maine, 1907	*Orono*	College St.
Wilbur, Walter Edmund, B. S., Ms. University of Maine, 1908	*Pembroke*	Main St.

SENIORS

Ames, Leroy Winfield, Bl.	*Bangor*	Bangor
Andrews, Wales Henry, Eh.	*Middleboro, Mass.*	Β Θ Π House
Arnold, Frances Elizabeth Stanislaus, Rm.	*Orono*	North Main St.
Bagg, William Clarke, Fy.	*Utica, N. Y.*	Β Θ Π House

Barron, Frank, Ee.	*Orono*	Forest St.
Battles, James Edmund, Ee.	*Frankfort*	Myrtle St.
Baylies, Wallace Brownell, Ce.	*New Bedford, Mass.*	Φ H K House
Berry, Earle Sylvester, Ee.	*Malden, Mass.*	Σ X House
Bigney, Frederick Rowe, Ee.	*Greenville*	Δ T Δ House
Bird, Roy James, Ch.	*South Paris*	Main St.
Bragg, Lester Morse, Ce.	*Stockton Springs*	Φ Γ Δ House
Bruce, Herbert Putnam, Ce.	*Lynn, Mass.*	Θ E House
Burke, Alfred Kimball, Ch.	*Kennebunk*	Σ A E House
Chadbourne, Vaughn Russell, Ee.	*Mattawamkeag*	Φ K Σ House
Chandler, Alfred Blanchard, Ee.	*Yarmouthville*	Mill St,
Chase, Walter Melville, Pm.	*Bangor*	Bangor
Clifford, Harold Linscott, Ce.	*Orono*	A T Ω House
Cole, Raymond Thurber, Me.	*South Portland*	Φ H K House
Collins, John Lambert, Ee.	*Gardiner, R. F. D. No. 15*	Main St.
Congdon, William Everett, Ee.	*Portland*	54 North Main St.
Conlogue, Frederick Willis, Ee.	*Houlton*	111 Oak Hall
Cook, Horace Jewett, Ce.	*Waterville*	A T Ω House
Corning, Grover Trites, Ec.	*Lynn, Mass.*	Φ K Σ House
Crocker, Ralph Willis, Ee.	*Bangor*	Bangor
Cruickshank, Robert Bacon, Fy.	*Akron, Ohio*	B Θ Π House
Cummings, Chester Goodman, Me.	*Vanceboro*	Δ T Δ House
Danforth, Hugh Nagles, Me.	*Denison, Texas*	A T Ω House
Davis, Fred Dumont, Fy.	*Brooks*	Pine St.
Eaton, James Murchie, Ee.	*Princeton*	Φ Γ Δ House
Fassett, Malcolm Edward, Ce.	*Woodfords*	Φ Γ Δ House
Fenn, Charles Henry, Ce.	*Portland*	Σ X House
Fortier, Frank Eugene, Ag.	*Turner Center*	Δ T Δ House
Fox, Kent Richard, Ch.	*Bangor*	B Θ Π House
Fulton, Charles Melville, Ce.	*Effingham Falls, N. H.*	Θ E House
Gardner, Albert Kinsman, Ag.	*Rockland*	B Θ Π House
Gardner, Leroy Whittier, Fy.	*Dennysville*	Θ X House
Gooch, Carl Joseph, Ce.	*Biddeford*	Φ H K House
Goodrich, George Percy, Ee.	*Phippsburg*	Mill St.
Graham, Charles Liguori, Ms.	*Brooklyn, N. Y.*	Θ X House
Hall, Clifton Allison, Ee.	*Brewer*	Φ K Σ House
Hardy, Simeon Joseph, Me.	*East Hampden*	Δ T Δ House
Harmon, W. Warren, Ec.	*Old Orchard*	Δ T Δ House
Hatch, Roy Otis, Ch.	*Orono*	Θ X House
Hicks, Weston Milliken, Ce.	*Portland, R. F. D. No. 4*	Mill St.
Hobbs, Ralph Everett, Ee.	*Lynn, Mass.*	Θ E House
Howard, George Crosby, Gk.	*Orono*	Oak St.
Jellison, Rupert A., Ch.	*Bar Harbor*	Δ T Δ House

Johnson, Chester Cleveland, Ms.	*Portland*	Σ Λ Ε House
Jordan, Edith Luella, Rm.	*Old Town*	Old Town
Jordan, George King, Me.	*Westbrook*	Θ Χ House
Jordan, Harvey Herbert, Ce.	*Waltham*	302 Oak Hall
Ketchum, Charles Clayton, Ce.	*Ashland*	111 Oak Hall
Kyes, Herman Winslow, Ee.	*Ipswich, Mass.*	Φ Η Κ House
LaMarche, George Everett, Ps.	*Orono*	Λ Τ Ω House
Lamb, Ernest, Ec.	*Utica, N. Y.*	Β Θ Π House
Leary, Herbert Daniel, Ce.	*East Boston, Mass.*	Θ Χ House
Leong, Yuen Foo, Ee.	*Sun Dong, Canton, China*	303 Oak Hall
Libby, Albert Edwin, Ce.	*Portland*	Κ Σ House
Littlefield, Philip Henry, Me.	*Portland*	Crosby St.
Littlefield, Roby Perkins, Ch.	*Oqunquit*	Λ Τ Ω House
Maddox, Austin Louis, Ce.	*Ellsworth*	302 Oak Hall
Merriam, Frank Edmund, Me.	*Skowhegan*	Main St.
Merrill, Walter Scott, Ce.	*Skowhegan*	311 Oak Hall
Moore, Arthur Scudder, Ee.	*West Lynn, Mass.*	Φ Κ Σ House
Morgan Edwin Randolph, Ec.	*Sangerville*	Θ Χ House
Norton, Raymond Pratt, Ch.	*Patten*	Δ Τ Δ House
Oak, Allen Edson, Ce.	*Caribou*	Β Θ Π House
Pettey, Franklin William, Bl.	*Fall River, Mass.*	Δ Τ Δ House
Philbrook, John Neal, Ce.	*Woodfords*	Λ Τ Ω House
Porter, Charles Augustus Cushman, Ce.	*Bangor*	Φ Κ Σ House
Pratt, Charles Oland, Ce.	*West Medford, Mass.*	Θ Ε House
Ray, Vinton Royal, Ce.	*Auburn*	Θ Ε House
Reed, Geneva Alice, Ms.	*Orono*	College Road
Reed, Marshall Everett, Fy.	*Roxbury*	Θ Χ House
Rogers, Frederick Drummond, Me.	*Richmond*	Σ Χ House
Rose, Joseph George, Ce.	*Brooklyn, N. Y.*	Θ Χ House
Royal, Harold Merton, Ee.	*Hermon*	Main St.
Russell, Edward Giddings, Ce.	*Eastport*	Σ Λ Ε House
Scales, James Grindle, Ch.	*Guilford*	Φ Γ Δ House
Schierloh, August Herman Theodore, Gm.	*Brooklyn, N. Y.*	Σ Λ Ε House
Sevrens, Oliver Fisk, Bl.	*North Woburn, Mass.*	Δ Τ Δ House
Simonton Philip Downing, Me.	*Yarmouthville*	Mill St.
Skolfield, Herbert Nason, Ce.	*North Harpswell*	Φ Κ Σ House
Smith, Charles French, Ee.	*Skowhegan*	Φ Γ Δ House
Snow, Edward Notley, Ee.	*Skowhegan*	Φ Η Κ House
Springer, George Edwin, Ee.	*Portland*	Θ Ε House
Stickney, Charles Edwin, Me.	*Portland*	Φ Γ Δ House

Stover, Isaac Maxwell, Ee.	*Orono*	Campus
Stuart, George Albert, Ag.	*Calais*	Α Τ Ω House
Sweetser, Herman, Pittee, Ag.	*Cumberland Center*	Σ Χ House
Travis, James Irving, Ec.	*Machiasport*	Σ Α Ε House
Tucker, Charles Henry, Ce.	*Orono*	30 Main St.
Wadsworth, George Sabine, Ag.	*Eastport*	Α Τ Ω House
Walker, Harold Edward, Ce.	*Sabattus*	Θ Χ House
Wallace, George Alexander, Ce.	*Portland*	Β Θ Π House
Webster, George Albert, Ee.	*Farmington*	201 Oak Hall
Wentworth, George Jacob, Ag.	*Kennebunk Beach*	Φ Η Κ House
Wentworth, William Hiram, Fy.	*Somersworth, N. H.*	Σ Χ House
Whitmore, James Leon, Ee.	*North Haven*	311 Oak Hall
Wiley, Fred Everett, Ee.	*Hartford, Conn.*	Θ Χ House
Winters, Amos Arthur, Ce.	*Waterville*	Κ Σ House
Workman, Thurlow Tracy, Ec.	*Brewer*	Δ Τ Δ House
Wright, Harold Williams, Ce.	*Brewer*	Σ Χ House

JUNIORS

Adams, Alfred Sanford, Ms.	*Newport*	Δ Κ House
Atwood, Albert Samuel, Ee.	*Phillips*	Φ Η Κ House
Barker, Harold Louis, Ce.	*Boston, Mass.*	University Inn
Barker, Jack Sears, Me.	*Calais*	Δ Τ Δ House
Barton, Eben Robert, Ce.	*Palmer, Mass.*	Θ Χ House
Bartow, William Edgar, Ch. Eng.	*Utica, N. Y.*	Σ Χ House
Bearce, George Dunham, Fy.	*Auburn*	Β Θ Π House
Benjamin, Charles Smith, Ch.	*Old Town*	Old Town
Blaisdell, Allen Holt, Me.	*Bangor*	57 Fifth St.
Blaisdell, Guy Marble, Ee.	*Farmington.*	University Inn
Blanchard, Alfred Michel, Ce.	*Southbridge, Mass.*	Θ Χ House
Blanchard, Ralph Childes, Ce.	*Cumberland Center*	Δ Κ House
Brown, Florence Evelyn, Hy.	*Old Town*	Old Town
Brown, Jennie Christianna, Eh.	*Orono*	Park St.
Buck, Raymond Wilbur, Ce.	*Monticello*	Σ Χ House
Burden, Harry Poole, Ce.	*East Lynn, Mass.*	Θ Χ House
Burgess, Harold Brainerd, Ce.	*Rockland*	Δ Τ Δ House
Burke, John Joseph, Ee.	*Chelsea, Mass.*	102 Oak Hall
Buzzell, Ralph Waldo, Ce.	*Rockport*	Φ Η Κ House
Chapman, George Bunker, Me.	*Holyoke, Mass.*	Φ Η Κ House
Chenery, Frederick Lincoln, Jr., Ee.	*Wayne*	Φ Κ Σ House
Conley, Albert Davis, Ch.	*Woodfords*	54 North Main St.
Coombs, David Clifford, Ee.	*Auburn*	Κ Σ House
Cooper, Parker Messer, Ce.	*Jefferson*	101 Oak Hall

Cousins, Irene, Hy.	*Old Town*	Old Town
Cushman, William Parsons, Ce.	*West Pownal*	207 Oak Hall
Davis, Raymond Webber, Ec.	*Guilford*	Φ Γ Δ House
Day, Letitia Elizabeth, Lt.	*Brewer*	Brewer
Day, Ralph Roscoe, Ee.	*Cornish*	Φ K Σ House
Dinsmore, James Leigh, Ec.	*Hallowell*	Φ H K House
Dixon, Thomas Libby, Ee.	*Lewiston*	105 Oak Hall
Doore, Clarence Freeland, Me.	*Dover*	Δ T Δ House
Duran, David Ray, Ce.	*Westbrook*	Δ T Δ House
Dwinal, Olaf Windsor, Ce.	*Auburn*	Θ X House
Eaton, Arthur Clement, Ch. Eng.	*Wenham, Mass.*	Σ X House
Everett, Jasper Willard, Ee.	*Norway*	Θ X House
Fish, Fred Enoch, Ce.	*Farmington*	Δ K House
Fitch, LeRoy Allan, Ce.	*East Sebago*	Δ K House
Folley, Delton Wharff, Ee.	*Sangerville*	University Inn
Geery, Louis Duncan Tallman, Ch.	*Katahdin Iron Works*	Φ H K House
Gerrish, Charles Samuel, Ce.	*Kittery Point*	29 Crosby St.
Gerrish, Leo Melville, Ee.	*Berlin, N. H.*	Σ A E House
Gifford, George Washington, Ee.	*Dennysville*	Σ A E House
Gilbert, Annie Hoadley, Lt.	*Old Orchard*	Mt. Vernon House
Gooch, Winslow Lamond, Fy.	*Alfred*	Σ X House
Goodnow, Alden Church, Ee.	*Fairhaven, Mass.*	B Θ Π House
Goodwin, Alexander Willard, Ee.	*Vanceboro*	Δ T Δ House
Gould, Ralph Wadlin, Ee.	*Belfast*	Stillwater
Hall, William Scribner, Ch.	*Norwich, Conn.*	Commons
Hamlin, Dunton, Ce.	*Orono*	Main St.
Hammond, Avery Carleton, Me.	*Orono*	Main St.
Harris, Hiram Elmer, Ee.	*West Minot*	32 North Main St.
Hart, Ashton Halsted, Ce.	*Presque Isle*	K Σ House
Haskell, William Oleson, Ch. Eng.	*Westbrook*	Φ Γ Δ House
Haslem, Howard Giles, Ce.	*Bangor*	Bangor
Hatch, Warren William, Me.	*Brooklyn, N. Y.*	North Main St.
Hebard, William Everett, Me.	*Fishdale, Mass.*	32 North Main St.
Holmes, Ralph Maynard, Ps.	*Ellsworth*	Σ X House
Homans, Harry, Ce.	*No. Vassalboro*	Δ K House
Hooper, Irvin Frothingham, Ce.	*West Lynn, Mass.*	Θ H K House
Hosmer, George Lawrence, Me.	*Rockland*	A T Ω House
Howe, George Henry, Jr., Ce.	*Caribou*	Σ X House
Ingham, Harold William, Ce.	*Haverhill, Mass.*	A T Ω House
Johnson, Charles A., Me.	*Waltham, Mass.*	University Inn
Johnson, Walter Hauteville, Ce.	*Oakland*	Θ X House
Jones, Sidney Morrison, Ce.	*Bangor*	B Θ Π House
Kavanah, Gladys Emma, Ms.	*Bangor*	Bangor

King, James Putnam, Ee.	*Peabody, Mass.*	Θ E House
Kingsley, Ernest Roy, Ee.	*Yarmouthville*	Main St.
Leavitt, George Clark, Bl.	*Norway*	202 Oak Hall
LeBaron, LeRoy Morse, Ee.	*West Wareham, Mass.*	212 Oak Hall
Lee, Horace Newton, Bl.	*Greenwood, Mass.*	College St.
Linn, Tse-sheng, Ec.	*Hong Kong, China*	College St.
Lord, George Lester, Ce.	*South Berwick*	Δ K House
Lycette, Cecil Leland, Ce.	*Houlton*	211 Oak Hall
McCarthy, Maurice Franklin, Ch.	*Lewiston*	K Σ House
Markle, Bert Christian, Ce.	*Northampton, Mass.*	Σ A E House
Marshall, Robert Clarence, Fy.	*Wellesley, Mass.*	Θ X House
Maxcy, Everett Haseltine, Ec.	*Gardiner*	Σ A E House
Maxwell, Edwin Clayton, Ce.	*Palmer, Mass.*	72 Main St.
Mayo, Clarence Arthur, Ee.	*Hampden Highlands*	B Θ Π House
Merrell, James Raymond, Ce.	*North Adams, Mass.*	Δ T Δ House
Merrill, Dimon Emery, Ee.	*Alfred*	201 Oak Hall
Morrison, Freeland John, Ch.	*Bangor*	Σ A E House
Murphy, Cyrus William, Jr., Ee.	*West Kennebunk*	Oak Hall
Nason, Fred Warner, Ch. Eng.	*Haverhill, Mass.*	A T Ω House
Oak, Donald Prescott, Ce.	*Bangor*	A T Ω House
Parsons, Wallace Emery, Ce.	*North Anson*	B Θ Π House
Patch, Clifford, Ch. Eng.	*Bangor*	Bangor
Patterson, Ralph Edwin, Ce.	*Bangor*	A T Ω House
Peaslee, Dana Newton, Ce.	*Lynn, Mass.*	Main St.
Peckham, Wentworth, Fy.	*Lewiston*	B Θ Π House
Phillips, George Alfred, Ce.	*Westbrook*	A T Ω House
Phinney, Chester Squire, Rm.	*Pawtucket, R. I.*	Θ X House
Pickup, Herbert Wilfred, Ec.	*Ipswich, Mass.*	Θ X House
Pinkham, Charles Joseph, Me.	*Farmington*	211 Oak Hall
Pinkham, Niles Cassius, Fy.	*Portland*	Φ Γ Δ House
Pond, Ralph Benjamin, Ee.	*Bangor*	Φ Γ Δ House
Prentiss, Mildred Louise, Gm.	*Brewer*	Mt. Vernon House
Quinneen, Charles Roger, Ee.	*Charlestown, Mass.*	Main St.
Rea, Charles Drummond, Ce.	*Southwest Harbor*	Φ K Σ House
Robinson, John Tyler, Ee.	*Sherman Station*	Middle St.
Russell, Harl, Ce.	*Dexter*	103 Oak Hall
Sargent, Harold Rodolph, Ce.	*Sedgwick*	Θ E House
Sawtelle, Philip Perry, Me.	*Augusta*	1 Main St.
Sawyer, Frank Sleeper, Ce.	*Sabattus*	Θ X House
Scales, Nelson Ned, Ec.	*Guilford*	Φ Γ Δ House
Sisson, Elmer Allen, Ee.	*So. Middleboro, Mass.*	212 Oak Hall
Smith, Nelson Ernest, Ee.	*Peabody, Mass.*	Θ E House
Smith, Russell, Ag.	*Auburn*	K Σ House

Southard, Frank Elwyn, Ec.	*Auburn*	Κ Σ House
Stanley, Winthrop Hamor, Ed.	*Hulls Cove*	Δ Τ Δ House
Strout, Philip Stanwood, Ce.	*So. Portland*	Θ Ε House
Sumner, Merton Rogers, Ce.	*South Paris*	Φ Κ Σ House
Taylor, Florence Anna, Ms.	*Hermon*	Mill St.
Thomas, Hayward, Eh.	*Easton*	College St.
Thompson, Lynwood Burkett, Fy.	*Belfast*	101 Oak Hall
Tobey, Elmer Robert, Pm.	*Norridgewock*	1 Main St.
Varney, George Newton, Me.	*East Rochester, N. H.*	Park St.
Verrill, Albert, Ch. Eng.	*Westbrook*	Δ Κ House
Vickery, Harry Whitman, Ee.	*East Auburn*	Φ Η Κ House
Waite, Sumner, Ec.	*Portland*	Φ Γ Δ House
Wakefield, George Arthur, Bl.	*Andover*	Φ Κ Σ House
Wakefield, Oscar Abel, Ce.	*Andover*	Φ Κ Σ House
Walker, Ernest Thaxter, Me.	*Biddeford*	Φ Κ Σ House
Warren, Benjamin Otis, Hy.	*Fryeburg*	Β Θ Π House
Wertheim, Leslie Jack, Ce.	*Berlin, N. H.*	Β Θ Π House
Wetherell, John Gamble, Ce.	*Portland*	Park St.
Wheeler, Stanley Mathews, Ec.	*South Paris*	Φ Κ Σ House
Whitney, Benjamin Burbank, Ce.	*Strong*	Σ Χ House
Whittier, Earle Ovando, Ch. Eng.	*Farmington*	Θ Ε House
Wilson, Winthrop Field, Ce.	*Portland*	Σ Χ House
Wood, Harold Grinnell, Fy.	*Hallowell*	Σ Α Ε House

SOPHOMORES

Adams, Archie Asbury, Me.	*Lagrange*	Main St.
Ash, John Emmons, Ee.	*Bar Harbor*	Θ Ε House
Averill, Helen Willard, Ch.	*Milltown*	Mt. Vernon House
Ayer Elmore, Me.	*Dorchester, Mass.*	Α Τ Ω House
Ballou, William Rice, Me.	*Bath*	Φ Γ Δ House
Bartlett, Emily Mary, Bl.	*Orono*	College St.
Batty, Charles Albert, Me.	*Worcester, Mass.*	Δ Τ Δ House
Bickford, Miretta Lydia, Lt.	*Skowhegan*	Mt. Vernon House
Buzzell, Robert Loring, Ec.	*Old Town*	Δ Τ Δ House
Carleton, Edward Frazier, Lt.	*Georgetown, Mass.*	Δ Κ House
Carr, John Oliver, Ch.	*Bangor*	Bangor
Cavanaugh, Charles Alton, Ag.	*Portland*	107 Oak Hall
Center, Irving Emory, Me.	*Kingston, Mass.*	Park St.
Chapman, Harry Wey, Ee.	*Harrison*	54 N. Main St.
Chase, Alden, Ee.	*Bryant's Pond*	Θ Χ House
Churchill, Fred Raymond, Ee.	*Cambridge, Mass.*	Φ Γ Δ House
Clapp, Alma Eliza, Ms.	*Brewer*	Brewer
Clark, George Freeman, Ce.	*Tremont*	308 Oak Hall

Cleaves, Carl Schurz, Ce.	*Bar Harbor*	Φ Γ Δ House
Cleaves, Charles Brown, Ee.	*Portland*	Crosby St.
Coffin, Celia May, Eh.	*Bangor*	Mt. Vernon House
Conners, Edward Warren, Ce.	*Great Works*	Great Works
Crabtree, Alfred Evans, Ee.	*Hancock*	Κ Σ House
Cummings, Nathan Clifford, Ee.	*Gorham*	Φ Γ Δ House
Darrell, Franklin Lloyd, Ce.	*Brooklyn, N. Y.*	Β Θ Π House
Deering, Arthur Lowell, Ag.	*East Denmark*	I Park St.
Dixon, Esther Margaret, Lt.	*Southwest Harbor*	Mt. Vernon House
Drew, Laurence Evans, Ce.	*Brunswick*	Σ Α Ε House
Dunlap, Clarence, Ee.	*Farmington*	1 Park St.
Dwyer, William Henry, Ee.	*Biddeford*	Δ Κ House
Dyer, Samuel, Ce.	*Attleboro, Mass.*	102 Oak Hall
Emerson, Walter Bradbury, Me.	*Biddeford*	Park St.
Estabrooke, Marion Corthell, Ds.	*Orono*	Main St.
Faulkner, Harold Clark, Me.	*Lynn, Mass.*	Θ Ε House
Fisher, Herbert Leir, Ce.	*Charlotte*	Α Τ Ω House
Flint, Margaret, Bl.	*West Baldwin*	*Mt. Vernon House*
Garland, Philip, Me.	*Old Town*	Φ Γ Δ House
George, Clifford Henry, Ee.	*East Orrington*	Φ Γ Δ House
Gleason, Wallace Fred, Ce.	*Mexico*	Σ Α Ε House
Gordon, Robert James, Ee.	*Bangor*	Bangor
Gould, Maynard Sumner, Ee.	*Camden*	Φ Η Κ House
Gould, William Sanford, Jr., Ee.	*Dexter*	301 Oak Hall
Grant, Charles Harold, Gm.	*Bangor, R. F. D. 3*	Brewer
Gray, William Melvin, Ag.	*Houlton*	Φ Κ Σ House
Guthrie, George Francis, Ch. Eng.	*Bangor*	Θ Χ House
Haskell, Benjamin, Ee.	*Westbrook*	Φ Γ Δ House
Hopkinson, Ralph Stimson, Ee.	*Saco*	Β Θ Π House
Houghton, Lloyd Everett, Fy.	*Lee*	Φ Κ Σ House
Hussey, Philip Rodney, Fy.	*Patten*	Φ Κ Σ House
Hussey, Robert Elliott, Ch.	*Woodfords*	Grove St.
Jackson, James Foster, Ee.	*Jefferson*	Σ Α Ε House
Jacobs, Lester Warner, Ce.	*Rockland, Mass.*	Grove St.
Jones, Austin Whittier, Ag.	*Bangor*	Κ Σ House
Jones, Lillian Curtis, Ms.	*Bangor*	Bangor
Jones, Maurice Daniel, Ag.	*Unity*	Φ Η Κ House
Joyce, Shirley Adelbert, Fy.	*Bar Harbor*	Φ Γ Δ House
Kelley, Frank Brackett, Fy.	*Bath*	Δ Τ Δ House
Kelley, Margaret June, Gm.	*Bangor*	Mt. Vernon House
Kent, Benjamin Calvin, Me.	*Stillwater*	Θ Ε House
King, George Edward, Jr., Ce.	*Bethel*	Θ Χ House

Lancaster, Frank Hodgkins, Ce.	*Presque Isle*	Φ H K House
Libby, Arthur Clarence, Ce.	*Scarboro*	305 Oak Hall
Lilly, Walter Harrison, Ce.	*Woolwich*	Σ X House
Loring, Paul Cushing, Ce.	*Yarmouthville*	Σ X House
Macdonald, Roger Winchester, Ce.	*Peabody, Mass.*	Θ X House
McDonald, Warren, Ce.	*Portland*	Φ Γ Δ House
McKeen, Ellis Wyman, Ag.	*Fryeburg*	B Θ Π House
McKenney, Lyman Atwell, Ee.	*Saco*	K Σ House
Merrill, Ruth, Hy.	*Auburn*	Bennoch St.
Miller, William James Henry, Fy.	*South Berwick*	Φ H K House
Morrill, Clide Gilman, Me.	*Wakefield, Mass.*	Σ X House
Mountfort, Oscar W., Ce.	*Nashua, N. H.*	40 Main St.
Mullins, William, Ec.	*Cambridge, Mass.*	Grove St.
Murphy, Patrick Henry, Ce.	*Essex, Conn.*	Δ T Δ House
Murray, Walter Edward, Ee.	*Lynn, Mass.*	Θ X House
Newell, Charles William, Ee.	*Houlton*	Φ K Σ House
Nickels, Albert Mortimer, Me.	*Cherryfield*	Σ A E House
Page, Austin Elmer, Ce.	*Malden, Mass.*	A T Ω House
Parker, George Leavitt, Ag.	*Skowhegan*	A T Ω House
Parker, William Emery, Ee.	*Harrington*	K Σ House
Perkins, Walter Ezra, Ce.	*Old Town*	Old Town
Pinkham, Seymour Leroy, Ee.	*Portland*	Φ H K House
Poole, James Plummer, Fy.	*Gloucester, Mass.*	A T Ω House
Poore, Ward Smith, Ag.	*Columbus, O.*	Σ X House
Quimby, Sherman Leslie, Me.	*So. Brewer*	Main St.
Rand, Lynne Thomas, Ce.	*Unity*	Σ X House
Reid, Robert Clifford Henry, Ee.	*Bangor*	Φ H K House
Richardson, Lester Lary, Ce.	*Old Orchard*	Main St.
Ridlon, Percy Fisher, Me.	*Greenwood, Mass.*	204 Oak Hall
Rowe, Charles Winfield, Ag.	*South Paris*	Campus
Russell, Luther Sampson, Ag.	*Orono*	North Main St.
Russell, Mary Etta, Bl.	*Orono*	North Main St.
Savary, Warren Hapgood, Ce.	*East Wareham, Mass.*	Φ H K House
Sawyer, Edward Eugene, Ch.	*Old Town*	Old Town
Schrumpf, William Ernest, Ag.	*Farmington*	Park St.
Shales, William Arthur, Ee.	*Belfast*	112 Oak Hall
Smiley, Leon Walter, Ce.	*Skowhegan*	Φ Γ Δ House
Smith, Montelle Chester, Ee.	*Old Town*	Θ E House
Southwick, William Alfred, Ee.	*West Peabody, Mass.*	Θ E House
Spear, Graham Brown, Ee.	*Springfield, Mass.*	Σ A E House
Sturtevant, Arthur Leroy, Ag.	*Milo*	Campus
Sullivan, Charles Eugene, Me.	*Gorham, N. H.*	Σ A E House
Sweetser, Harlan Hayes, Fy.	*Cumberland Center*	202 Oak Hall

Talbot, Ralph Lee, Ee.	*Lewiston*	Φ H K House
Tartre, Charles Wilfred, Ee.	*Biddeford*	Σ A E House
Thompson, Harry Ernest, Ee.	*Bath*	Oak Hall
Underhill, John Wh'tley, Ce.	*Reading, Mass.*	Θ E House
Washburn, Dana Peabody, Me.	*Calais*	B Θ Π House
Webster, Ernest John, Ee.	*Farmington*	Park St.
Weeks, Allen Henry, Me.	*Jefferson*	Forest St.
Whitcomb, Newell Bryant, Ec.	*Bangor*	B Θ Π House
Winchester, Frank William, Ce.	*Lynn, Mass.*	Θ X House
Winn, Harold Earl, Ce.	*Dover, N. H.*	Mill St.
Witham, Walter Remick, Ce.	*Madison*	Φ K Σ House
Woodberry, George Roundy, Ec.	*Beverly, Mass.*	Σ A E House
Woodman, Carrie Luella, Ms.	*Claremont, N. H.*	Mill St.
Woodward, Karl Douglas, Ch.	*Kingston, Mass.*	K Σ House
Worden, George Newton, Ag.	*Vanceboro*	Park St.
Worster, Helen Charlotte, Eh.	*Bangor*	Mt. Vernon House

FRESHMEN

Ackley, Edward Preble	*Peaks Island*	Φ H K House
*Allen, Clifton Lowery	*Mt. Vernon*	University Inn
Amadon, Arthur Franklin	*Boston, Mass.*	A T Ω House
Ames, Forrest Bertram	*Bangor*	Bangor
Annable, Burleigh Ansel,	*Lynn, Mass.*	Θ X House
Ayer, Harold Francis	*Haverhill, Mass.*	Θ X House
Bell, Wilbur Carroll	*Woodfords*	10 Pine St.
Benson, Arthur Wilhelm	*Wellesley, Mass.*	Δ T Δ House
Bigelow, Elson Hartwell	*Ayer, Mass.*	K Σ House
Bird, Maurice Cobb	*Rockland*	B Θ Π House
Blanchard, Franklin Roy	*Beverly, Mass.*	32 North Main St.
Blanchard, Robert Germain	*Cumberland Center*	Δ K House
Blanchard, Maurice Leland	*Newport, Vt.*	University Inn
Bolton, Philip Sumner	*Gorham*	Coburn Hall
Bradbury, Ira Miller	*Gorham*	Φ Γ Δ House
Brean, Lloyd Francis	*Lee*	Φ K Σ House
Brewer, Warren Grant	*Peaks Island*	Φ Γ Δ House
Britt, John Manning, Jr.	*Cumberland Center*	College St.
*Brooks, James Strothard	*Brewer*	Φ K Σ House
Brown, Philip Warren	*South Portland*	Θ E House
Cannon, Arthur Hildreth	*Orono*	Orono
Carey, John Winchester	*Buckfield*	B Θ Π House
Carleton, John Harvey	*South Berwick*	A T Ω House

* In partial standing.

Carter, William Simpson	*Bar Harbor*	Φ Γ Δ House
* Chandler, Clifton Edward	*Portland*	Φ Γ Δ House
* Chase, Charles Arthur	*Sebec*	Δ T Δ House
Chase, Walter Roland	*Beverly, Mass.*	Σ X House
Chase, Edward Everett	*Bluehill*	Σ X House
Church, James Elwood	*Gardiner*	Myrtle St.
Clark, George Freeman	*Tremont*	308 Oak Hall
Clark, George Clarence	*Portland*	309 Oak Hall
Clark, Vernal	*Guilford*	Θ E House
Creeden, James Coharn	*Lewiston*	310 Oak Hall
Cronan, Mark Dennis	*Middleton, Mass.*	204 Oak Hall
Crosby, Harry Lawrence	*Portland*	K Σ House
Crossman, Mae Evelyn	*Claremont, N. H.*	Mt. Vernon House
Cushing, Irving Beecher	*Freeport*	K Σ House
Danforth, Stephen Paul	*Foxcroft*	Θ X House
Davis, Oscar Henry	*North Berwick*	K Σ House
Dillingham, Winfield Presbury	*Freeport*	K Σ House
* Doak, Marthon	*Belfast*	Φ Γ Δ House
Dowd, Edward Francis	*Medina, N. Y.*	Oak Hall
Eales, Frank Henry	*Vanceboro*	Δ T Δ House
Fairbrother, Nathaniel Smith	*Guilford*	College St.
Fickett, Ernest Leslie	*Portland*	206 Oak Hall
Finkbeiner, Daniel Talbert	*Clearfield, Penna.*	Pine St.
* Fletcher, William Leroy	*Dorchester, Mass.*	Δ T Δ House
Floyd, Raymond	*Brewer*	Φ K Σ House
Foster, Daniel Albert	*Ellsworth Falls*	308 Oak Hall
Foster, Philip	*Waterville*	Θ X House
Foster, Raymond Guilford	*Portland*	Σ A E House
* Getchell, Dennis	*Limestone*	B Θ Π House
Gibbs, John	*Livermore Falls*	1 Park St.
Gifford, William Edward	*North Fairfield*	1 Park St.
Goodwin, Fred Gilman	*Charleston*	Campus
Groves, Walter Clyde	*Camden*	Peters St.
Haines, Frank Warren	*Dexter*	B Θ Π House
Hamlin, Harold	*Orono*	Main St.
Harmon, Paul Stanley	*Woodfords*	Σ X House
Harriman, Royden Henry	*Bangor*	Bangor
Hart, John Walter	*Holden*	Peters St.
Harvey, Alice Josephine	*Bangor*	Mt. Vernon House
Higgins, Thomas Carol	*Bar Harbor*	Θ E House
Hinkley, Harry Wendell	*Kangeley*	16 Main St.

* In partial standing.

Hodges, Ralph Corydon	*Richmond*	Δ K House
Huntington, Richard Thomas	*Augusta*	Σ A E House
* Hurd, Stephen Brown	*Dover*	Δ T Δ House
Jackman, Percy Edward	*Vanceboro*	Park St.
Jackson, Raymond Olden	*Harrison*	Φ H K House
Jennison, Elwood Whitney	*Bangor*	K Σ House
Jewett, Donald Campbell	*Cherryfield*	Σ X House
Johnson, Linwood Hill	*Portland*	Park St.
Jones, Carrol Clair	*Solon*	Φ H K House
Jordan, Harry Gilman	*Waltham*	209 Oak Hall
Kiernan, John Henry	*Wareham, Mass.*	Φ H K House
Kimball, Earle Nelson	*Auburn*	203 Oak Hall
Kingsbury, Alden Williamson	*Medfield, Mass.*	Φ K Σ House
Knight, Carroll Morse	*Cliftondale, Mass.*	209 Oak Hall
Ladner, Ralph	*Orono*	Orono
Littlefield, John	*Brewer*	University Inn
Lucas, Warren Stanhope	*Foxcroft*	Park St.
Lutts, Carlton Gardner	*Kittery*	Crosby St.
McAlary, Allen Francis	*Waterville*	A T Ω House
McCarthy, William Joseph	*Lewiston*	Θ E House
McLain, Lester Leroy	*Pemaquid Beach*	Σ A E House
MacLauchlin, Leon Stanley	*Fort Fairfield*	Φ K Σ House
Matthews, Frank	*Guilford*	Θ E House
Merrill, Mildred Hastings	*Auburn*	14 Bennoch St.
Merrill, William Hammond	*Bangor*	Bangor
Mitchell, William Johnstone	*Fairhaven, Mass.*	Pine St.
Monahan, William Collins	*South Framingham, Mass.*	Bangor
Murray, Florence	*Orono*	Orono
Nash, Harold Harlem	*Camden*	29 Crosby St.
Nash, Walker	*Cherryfield*	University Inn
Norberg, Herbert Conrad	*New Sweden*	Δ K House
Norton, Carlos Everett	*Cumberland Center*	Δ K House
Ober, John Larcom	*Beverly, Mass.*	Σ A E House
Payson, Carle Pierce	*Guilford*	Θ E House
Phelps, Donald	*Robbinston*	North Main St.
Pilot, Michael	*Auburn*	Bangor
Pinkham, Robert Arthur	*Farmington*	210 Oak Hall
Platt, James Nelson	*Abington, Conn.*	Oak Hall
Pope, Morrill Stuart	*East Machias*	Φ Γ Δ House
Powers, Richard Anderson	*Portland*	Φ H K House
* Proctor, John Henry	*Revere, Mass.*	Σ X House

* In partial standing.

Razee, Herman Clifford	*Attleboro, Mass.*	108 Oak Hall
Richards, Harold	*Belfast*	Δ K House
Richardson, Carroll Raymond	*Oakland*	208 Oak Hall
Ricker, Elwyn Tristram	*North Saco*	Oak Hall
Rounds, Oscar Harris	*Reading, Mass.*	Φ K Σ House
Sampson, Albert Edward	*Gorham*	Coburn Hall
* Sanborn, Gilbert Gould	*Bangor*	Bangor
Sansoucie, William	*Southbridge, Mass.*	Θ X House
* Savage, Ernest Thompson	*Bangor*	Bangor
Sawtelle, Donald Wing	*Orono*	Orono
Sawtelle, Hale Forbes	*Auburn*	Φ H K House
Sawyer, Allan Frank	*Milbridge*	B Θ Π House
* Sawyer, Winfield Fenno	*Bangor*	Bangor
Seabury, Rollins Angove	*Yarmouth*	Θ E House
* Sederquest, Allen Ernest	*Wakefield, Mass.*	Σ X House
Seekins, Leon Elroy	*Skowhegan*	K Σ House
Shepherd, Thomas Dudley	*Wellesley Hills*	Park St.
Short, Howell Chaffee	*Pawtucket, R. I.*	Θ X House
* Simpson, George Stevens	*Marlboro, Mass.*	Oldtown
Small, Nathan Houston	*Belfast*	Δ K House
Small, Ralph Hugo	*Oakland*	Θ X House
* Smith, Arthur Fred	*Peabody, Mass.*	Θ E House
Smith, Leon Campbell	*Topsham*	203 Oak Hall
Spencer, Frank Foss	*Berwick*	Σ X House
Springer, Vida	*Franklin*	Mt. Vernon House
Stone, Walter Christopher	*Clinton, Mass.*	University Inn
Sullivan, Willis Edmund	*Biddeford*	307 Oak Hall
Sukeforth, Raymond Oscar	*Fort Fairfield*	Σ X House
Suminsby, Howell Kirkby	*Bar Harbor*	Main St.
Swasey, Fred Harold	*South Berwick*	Φ K Σ House
* Tabor, James Atwood, Jr.	*Corinna*	Oldtown
Tashjian, Edward Hagoh	*Smyrna Mills*	Commons
Tilly, Glenwood Goding	*Ashland*	A T Ω House
Tipping, Charles Herbert	*Claremont, N. H.*	A T Ω House
Treat, Gladys Evelyn	*Chelsea, Mass.*	Mt. Vernon House
Tuck, Leon Sylvester	*Lee*	Crosby St.
Underhill, Charles Warren	*Reading Mass.*	Θ E House
* Utecht, Mary Ellen	*Topsham*	Mt. Vernon House
Wallace, John Clyde	*Portland*	B Θ Π House
Wardwell, Herbert Maurice, Jr.	*Newport*	Φ H K House
Webb, Antoinette	*Bangor*	Mt. Vernon House

* In partial standing.

Wescott, Chester Arthur	*Bar Harbor*	Φ Γ Δ House
Wescott, Clifford Walker	*Patten*	K Σ House
Wescott, Guy Raymond	*Rumford*	40 North Main St.
Weston, Edward Gordon	*Fryeburg*	Oak Hall
Wetherbee, Ralph Wilbur	*Hudson, Mass.*	Bangor
Whitten, Alice Idella	*Belfast*	Mt. Vernon House
Williams, Thomas Hughes	*Brownville*	207 Oak Hall
Wilson, Warren LeRoy	*Houlton*	Orono
Wing, Roscoe Adelbert	*Oldtown*	Θ E House
Young, George Edgar	*Skowhegan*	Φ Γ Δ House
Young, Muriel	*Jacksonville*	Mt. Vernon House
Young, Ralph Edmund	*Lebanon, N. H.*	University Inn

SPECIAL STUDENTS

Adams, Arthur Linwood, Ee.	*Brewer*	Brewer
Allen, Edward Herbert, Fy.	*Dorchester, Mass.*	Main St.
Alton, Edward Samuel, Ee.	*Lynn, Mass.*	Θ E House
Blossom, Waldo Ames, Ag.	*Boothbay Harbor*	K Σ House
Bowdoin, Emery Ray, Ec.	*Bucksport*	Main St.
Burpee, Albert Rice, Ch.	*Rockland*	30 Main St.
Bushfield, Gordan, Ag.	*Topsham*	Orono
Chase, Arthur Clifford, Fy.	*Sheepscott*	Σ A E House
Chilcott, Rebecca, Ds.	*Bangor*	Bangor
Clark, Lowell Freeman, Me.	*Hampden*	112 Oak Hall
Codaire, Alfred Hotchkiss, Ce.	*Collinsville, Conn.*	Δ T Δ House
Cowan, Walter Albion, Pl.	*Pittsfield*	103 Oak Hall
Davis, Raymond Earle, Ce.	*Rumford*	Θ E House
Derby, Frank Holliday, Ce.	*Revere, Mass.*	A T Ω House
Dyer, Guy Valentine, Fy.	*Calais*	Σ X House
Fiske, Raymond Houghton, Fy.	*Lincoln*	Myrtle St.
French, Roy Waldo, Eh.	*Orange, Mass.*	Σ X House
Gale, George Bryant, Ag.	*Petersham, Mass.*	Δ K House
Gregson, Lawrence Halliwell, Fy.	*Newburyport, Mass.*	Δ T Δ House
Hall, Rufus Atwood, Ce.	*Warren*	Commons
Harrington, Carroll Prescott, Ee.	*Dexter*	301 Oak Hall
Harrington, Daniel Michael, Eng.	*Hallowell*	University Inn
Hatch, Harrison Morton, Ag.	*West Groton, Mass.*	Θ X House
Henderson, Robert Raymond, Ch.	*Madison*	110 Oak Hall
Hilton, Will, Ce.	*Greenville*	Φ K Σ House
Homer, Morton Leslie, Ch.	*Bucksport*	K Σ House
Kinney, Fay Delancy, Me.	*Dexter*	Θ E House
Leland, Clarence Roy, Ag.	*Mechanic Falls*	Park St.

Lewis, Enos Boise, Ce.	*Orono*	Peters St.
McManus Margaret Ellen, Eh.	*Bangor*	Bangor
Maddison, Walter Franklin, Me.	*West Lynn, Mass.*	Pine St.
Mariner, Hazel Folsom, Rm.	*Milford*	Milford
Morris, Albert Emanuel, Pl.	*Oldtown*	Oldtown
Munoz, Eugenio Luis, Ce.	*Ponce, P. R.*	109 Oak Hall
Page, Edwin Richard, Ee.	*Winterport*	Δ K House
Patterson, Arthur Willis, Ag.	*Castine*	Σ A E House
Quarmby, George Henry, Ee.	*Saugus*	Campus
Rattray, Walter Carlton, Ee.	*Bangor*	Bangor
Richardson, Douglas Leffingwell, Ch.	*Tremont*	K Σ House
Richardson, Howard Byron, Ce.	*Southwest Harbor*	Φ K Σ House
Robinson, Chauncey Stephen, Ce.	*Portland*	Φ Γ Δ House
Ryder, Charles Edward, Ag.	*Allston, Mass.*	A T Ω House
Scales, Eugene Mudgett, Me.	*Guilford*	Θ E House
Tibbetts, Julia Jane	*Oldtown*	Oldtown
Wells, Mary, Gm.	*Baldwinsville, N. Y.*	Mt. Vernon House
Wilkinson, John Daniel, Ce.	*South Portland*	Θ E House
Winchester, Sidney Hodge, Fy.	*Corinna*	Φ H K House
Wu, Maen Chang, Ce.	*Canton, China*	Oldtown
York, George James, Ch.	*Yarmouthville*	

SHORT PHARMACY

SECOND YEAR

Davis, Frederic Libby	*South Berwick*	A T Ω House
Greeley, George Fred	*Bangor*	Oak Hall
Helgesen, Fred	*Newport, R. I.*	Beach St.
Josselyn, Royce Brewster	*South Hanson, Mass.*	Φ K Σ House
Steele, Clayton Harvey	*West Jonesport*	Φ H K House
Ward, George Campbell	*Kennebunk*	A T Ω House

FIRST YEAR

Bowdoin, Harold Webster	*Kennebunk*	Σ A E House
Butts, Russell Carlton	*Kingfield*	North Main St.
Hinckley, Victor Hugo	*West Jonesport*	Park St.
Hutchins, Carlton	*Kingfield*	40 North Main St.
Johnson, Guy Stanley	*Masardis*	College St.
Judkins, Walter Clyde	*Waterville*	North Main St.
Murphy, William Edward	*Portland*	10 Pine St.

Newport, Edward Foster	*Amherst, Mass.*	Commons
Parker, Floyd Emlin	*Phillips*	Σ A E House
Pierce, Henry, Jr.	*Bangor*	Bangor
Stewart, Fred Thomas	*Linneus*	Oak Hall
Treat, John Whittier	*Bangor*	Bangor
Wilson, George Renfrew	*Searsport*	Δ K House

TEACHERS' COURSE IN AGRICULTURE.

Herbert Staples Hill, B. A.	*Westbrook*	12 Bennoch St.

SCHOOL OF AGRICULTURE

SECOND YEAR

Hartill, Leonard Ramsden	*Brunswick*	College Inn
Payson, Raymond Murray	*Rockland*	College Inn
Pillsbury, Philip Otto	*Rangeley*	Grove St.
Taylor, Curtis	*Springvale*	Campus
True, Warren Dudley	*Litchfield*	Campus

FIRST YEAR

Beckler, Earle Harlow	*Livermore Centre*	Coburn Hall
Chapman, Everett Thomas	*Harrison*	54 North Main St.
Dean, John	*Biddeford*	Park St.
Haynes, Frank Albert	*Gardiner*	Campus
Hews, Ray Delma	*Ashland*	Orono
McDougal, Harold George	*Van Buren*	Park St.
Markham, Enoch Arden	*Skowhegan*	Spaulding's Corner
Peabody, Maurice Arland	*Exeter*	Spaulding's Corner
Pingree, Ferley Louville	*Denmark*	Campus
Piper, Seavey Allan	*Troy*	Bangor
Plant, Stuart Dowling	*Gardiner*	4 Forest Ave.
Wadsworth, Harry Bradford	*Cornish*	Park St.
Wilbur, Melvin Foster	*Pembroke*	Main St.

THE COLLEGE OF LAW

GRADUATE STUDENTS

Blanchard, Benjamin Willis, LL. B. University of Maine, 1904.	*Bangor*	118 Congress St.
Bowker, Edgar Marshall, LL. B. George Washington University, 1902.	*Whitefield, N. H.*	

Bridges, Corril Ellsworth, LL. B. *Charlestown, Mass.*
Albany Law School, 1887.
Brown, Leon Gilman Carleton, LL. B. *Milo*
University of Maine, 1905.
Clough, George Edwin, LL. B. *Monson, Mass.*
University of Maine, 1904.
Cotton, Carl, B. A., LL. B. *Contoocook, N. H.*
Colby College, 1900. University of Maine, 1906.
Davis, Waldo Trevor, B. A., LL. B. *Worcester, Mass.*
Dartmouth College, 1901. University of Maine, 1905.
Dudley, John Perley, LL. B. *Houlton*
Colby College. University of Maine, 1908.
Foster, Walter Herbert, LL. B. *Dorchester, Mass.*
University of Maine, 1905.
Fox, Lewis Edwin, LL. B. *Worcester, Mass.* 262 Ohio St.
University of Maine, 1906.
Graton, Claude Dewing, LL. B. *Burlington, Vt.*
University of Maine, 1900.
Greeley, Archer Rawson *Webster, Mass.*
Lewis, Charles Goodell, LL. B. *Boston, Mass.*
University of Maine, 1908.
Linehan, Daniel Joseph, LL. B. *Haverhill, Mass.*
University of Maine, 1905.
Lord, Harry, LL. B. *Bangor* 82 Cumberland St.
University of Maine, 1902.
Monroe, Edward Roy, LL. B. *Portland*
University of Maine, 1907.
Montague, Henry Burt, LL. B. *Southbridge, Mass.*
Cornell University, 1895.
Noble, Ernest Eugene, B. A., LL. B. *Portland*
Colby College, 1897. University of Maine, 1903.
Perkins, DeForest Henry, Ph.B., M. A., LL. B. *Skowhegan*
University of Maine, 1900, 1905. Illinois College of Law, 1906.
Purinton, Frank Howard, B. A., LL. B. *Lewiston*
Bates College, 1896. University of Maine, 1908.
Record, Lewis Stillman, Ph. B., LL. B. *Ashland, N. H.*
Brown University, 1902. University of Maine, 1905.
Reid, Charles Hickson, LL. B. *Bangor* 60 Lincoln St.
University of Maine, 1903.
Robinson, Curville Charles, LL. B. *New York City*
University of Maine, 1905.
Robinson, William Henry, LL. B. *Bangor* 42 Hammond St.
University of Maine, 1902.

Seavey, Ernest Linwood, LL. B., *Caribou*
University of Maine, 1908.
Skillin, Carroll Brown, LL. B. *Portland*
University of Maine, 1908.
Warren, John Clifford, B. S., LL. B. *Portland*
University of Maine, 1902. Boston University, 1905.
Weeks, William Marston, B. D., LL. B. *Lebanon, Tenn.* 25 State St.
Yale University, 1896. Cumberland University, 1908 and University of Maine, 1909.

SENIORS

Anderson, William Lewis, Jr., University of Maine.	*Hartland*	25 State St.
Bass, Frank Lyman, B. A., Bowdoin College, 1907.	*Bangor*	82 Third St.
Booth, James Wilmer Brown University and Clark College.	*Worcester, Mass.*	77 Broadway
Caplan, Israel Harry	*Portland*	176 Court St.
Elmassian, Astor	*Lynn, Mass.*	47 Fifth St.
Emery, Oscar Harris	*Bar Harbor*	53 Blackstone St.
Getchell, Carl Folsom, B. A. Dartmouth College, 1905.	*Newport*	25 State St.
Grady, Edward Joseph	*Bangor*	92 First St.
Grinnell, Herbert Leroy, Jr., B. A. Bowdoin College, 1902.	*Derry, N. H.*	7 Brimmer St., Brewer
Havey, Andrew Percy, B. A. Bowdoin College, 1903.	*West Sullivan*	25 State St.
Holman, William Harrison Member Maine State Bar.	*Bangor*	200 Leighton St.
Jones, Lawrence Vivian University of Maine	*Bangor*	267 Pine St.
Jude, William Floyd Bowdoin College.	*Ellsworth*	25 State St.
Lemaire, Charles Wendell	*Taunton, Mass.*	7 Boynton St.
Mitchell, Robie Lawton, B. A. University of Maine, 1907.	*West Newfield*	7 Boynton St.
Norwood, Seth Wademere Member Maine State Bar.	*Tremont*	25 State St.
Packard, Bertram Everett, B. A. Bates College, 1900.	*Litchfield*	25 State St.
Powers, Elisha Shaw Bowdoin College. Member Maine State Bar.	*Houlton*	25 State St.

Roberts, Willis Elmer, B. A., Bowdoin College, 1907.	*Brunswick*	7 Boynton St.
Sawyer, Joseph Warren	*Milbridge*	134 Cumberland St.
Spencer, Bertrand Edwin, B. A. Dartmouth College, 1906.	*E. Norwich, L. I.*	Y. M. C. A.
Taylor, Henry Nathan	*Portland*	176 Court St.
Toole, Christopher, Jr. Bowdoin College. Members of Maine State Bar.	*Bangor*	48 Ohio St.

JUNIORS

Blaisdell, William Bradley	*North Sullivan*	77 Broadway
Campbell, Collen Carroll	*Provincetown, Mass.*	62 Holyoke St., Brewer
Carter, Rodney Walker	*Bluehill*	147 Essex St.
Chesley, Franklin Russell	*Saco*	229 State St.
Conary, Wilfred Grindle	*Bluehill Falls*	147 Essex St.
Conners, George Leroy	*North Attleboro, Mass.*	The Jerrard
Gould, Daniel Israel Bowdoin College.	*Bangor*	127 Congress St.
Harvey, Brad Dudley	*Haverhill, Mass.*	8 Somerset St.
Hosmer, Charles Bridgham	*Hudson, Mass.*	474 Main St.
Liggett, John Edmund	*Augusta*	72 West Broadway
Sherry, Charles Ernest	*West Acton, Mass.*	Y. M. C. A.
Snow, Charles Augustus	*Milo*	Y. M. C. A.
Sweeny, William Henry	*Worcester, Mass.*	77 Broadway
Sweetser, George Roy, B. A. Unversity of Maine, 1909.	*Bangor*	36 Seventh St.
Tertzag, Jacob Kevork, B. A. Euphrates College, 1902.	*Mamouret-ul-Aziz, Armenia*	350 Union St.
Varney, Henry Harrison	*East Rochester, N. H.*	Orono

FIRST YEAR CLASS

Adams, Frederick Prescott	*Cherryfield*	218 French St.
Baldwin, William Vincent Reginald	*No. Wilbraham, Mass.*	79 Kenduskeag Ave.
Burns, Joseph Leo	*Taunton, Mass.*	7 Boynton St.
Clarke, Percy Truman	*Franklin*	Y. M. C. A.
Cook, Albert Fremont University of Maine.	*Bangor*	Alpha House, Orono
Davis. John Bradford	*Haverhill, Mass.*	79 Kenduskeag Ave.

Dow, Charles Whitfield Bates College.	*Caribou*	39 Haymarket Sq.
Fellows, Frank University of Maine.	*Bangor*	33 Jefferson St.
Gardner, Phillips Brooks	*Machias*	316 Hammond St.
Gaffney, John Lyon Holy Cross College.	*Bangor*	313 State St.
Grant, David Stuart, Jr.	*Stoneham*	Y. M. C. A.
Greene, Arthur Albert University of Vermont.	*Highgate Center, Vt.*	185 Center St.
Haines, William, B. A. Bowdoin College, 1909.	*Waterville*	Y. M. C. A.
Hofstedt, Eugene Albert	*Winchendon, Mass.*	53 Fourth St.
Ingalls, Ralph Morrill	*Bridgton*	53 Fourth St.
Madore, John Bernard, B. A. Van Buren College, 1908.	*Van Buren*	Y. M. C. A.
McHale, Martin Joseph University of Maine.	*Stoneham, Mass.*	Θ Ε House, Orono
Peirce, Waldo, B. A. Harvard College, 1908.	*Bangor*	75 Hammond St.
Porton, Samuel	*Belfast*	Y. M. C. A.
Putnam, Aaron Albert, B. A. Bowdoin College, 1908.	*Houlton*	77 Broadway
Rand, Howard Benjamin	*Haverhill, Mass.*	79 Kenduskeag Ave.
Sawyer, Henry Waide	*Milbridge*	31 Kossuth St
Schierloh, August Herman Theodore University of Maine.	*Brooklyn, N. Y.*	Σ Α Ε House, Orono
Smith, Bernard Peter	*Cherryfield*	28 Second St.
Sullivan, Thomas Edward	*Lubec*	31 Kossuth St.

SPECIALS

Beliveau, Albert	*Rumford*	Grove St., So. Brewer
Clancy, Frank Bernard	*Nashua, N. H.*	22 Ohio St.
Doak, Carleton	*Belfast*	148 Essex St.
Harvey, Leigh Irving	*Bangor*	8 Somerset St.
Higgins, Percy Elmer	*Ellsworth*	303 Hammond St.
Long, Edmund Joseph	*Lynn, Mass.*	22 Sanford St.
Morrison, Roy University of Maine	*Saco*	Alpha House, Orono
Piper, Fred Edgecomb Richards, B. A. Bowdoin College, 1906. Harvard Law School.	*Portland*	29 Palm St.
Sacknoff, Harry Alvah	*Portland*	221 Center St.

SUMMER TERM

(Abbreviations indicate subjects taken)

Adams, Ida Matilda Teacher.	*Orono*	Ed.
Ballou, William Rice	*Bath*	Hy. Ms. Rm.
Barker, Harold Louis	*Boston, Mass.*	Gm. Ch. Ec. Ps. Hy.
Barron, Frank	*Orono*	Ec. Ps. Rm.
Bartlett, Sanford Simon	*Damariscotta Mills*	Ms. Eh. Gm. Lt.
Blanchard, Bessie Grant Teacher.	*Cumberland Center*	Ed. Eh. Hy.
Bowdoin, Emery Ray	*Bucksport*	Ms. Rm. Eh. Hy.
Carpenter, Frank Simonds	*Madison*	Ms. Eh. Hy.
Carter, Irving Willis	*Brewer*	Rm. Bl. Ms.
Carvill, Alonzo Harper Principal.	*Auburn*	Gm. Ps. Ch. Rm.
Chaplin, Jeanette Evangeline Assistant Teacher.	*Orono*	Ed. Ec.
Chapman, Everett Thomas	*Harrison*	Rm. Ms.
Chapman, Harry Wey	*Harrison*	Rm. Ms.
Chase, Alice Elizabeth Guild	*Orono*	Rm.
Chick, Margaret Amy Teacher.	*Bangor*	Gm. Rm. Eh
Chick, Stanley	*Bangor*	Ms. Rm. Lt.
Clemons, Samuel Wadsworth	*Hiram*	Eh. Ec. Ms.
Clifford, Harold Linscott	*Orono*	Gm. Ch. Ec.
Coburn, Martha Alice Teacher.	*Orono*	Ed.
Coffin, Charles Frederick	*Ashland*	Ms.
Cushman, William Parsons	*West Pownal*	Ms. Ps.
Danforth, Hugh Nagles	*Dennison, Texas*	Ec. Rm. Md. Hy.
Daniels, Clyde Folsom	*Thomaston*	Ms. Lt. Ps. Eh.
Davee, Everett Willard	*Orono*	Ed. Ec.
Dinsmore, Ernest LeRoy, B. A.	*Whiting*	Ed. Ch. Ps. Hy.
Dinsmore, Mary Crane	*Whiting*	Rm. Ec. Hy.
Dixon, Esther Margaret	*Southwest Harbor*	Lt. Gm. Rm.
Drew, Laurence Evans	*Brunswick*	Ch. Ps. Ms. Hy.
Elden, Nellie May Teacher.	*Charleston*	Rm. Eh.
Emery, Helen Ricker Principal.	*Cherryfield*	Ed. Ec. Ms.
Ervine, Annie	*Round Pond*	Ec. Eh.
Evans, Annie	*Round Pond*	Ec. Eh.
Everett, Jasper Willard	*Norway*	Ch. Ec.

Faulkner, Harold Clark	*Lynn, Mass.*	Ch. Eh. Rm.
Faulkner, William Thomas	*Orono*	Ps. Ms.
Fitch, Leroy Allen	*East Sebago*	Ps. Ch. Rm.
Foss, Maurice Colby	*New Portland*	Lt. Ps. Rm. Eh. Ch.
Gordon, Adelbert Willis Superintendent and Teacher.	*West Sullivan*	Lt. Rm.
Gould, Ralph Wadlin	*Belfast*	Md. Ec. Hy.
Gould, William Sanford	*Dexter*	Ps. Ec. Rm.
Graves, Justin Dwight	*Orono*	Eh. Rm. Ed.
Graves, Margaret Edwina	*Orono*	Eh. Rm.
Hammond, Arthur Augustus	*Bridgeport, Conn.*	Ch. Ms.
Hanley, Elizabeth Fitzgerald Teacher.	*Thomaston*	Eh. Lt. Hy.
Harris, Abram	*Evanston, Ill.*	Ed. Rm.
Hart, Alice Pottle	*Orono*	Rm.
Harvey, Florence Evelyn	*Orono*	Rm.
Hatch, Roy Otis	*Orono*	Ms.
Haynes, Evangeline Mabel Teacher.	*Old Town*	Rm.
Hill, Florence Teacher.	*Norway, Mass.*	Ed.
Hodgdon, Daniel Russell Teacher.	*Gorham*	Ec. Ps. Ms. Gm. Ed.
Hodgdon, Leona Fogg Assistant Teacher.	*Gorham*	Ec. Eh. Rm. Hy.
Hodgkins, Alden E., B. S. Teacher.	*Damariscotta Mills*	Ec. Ed.
Hopkins, Florence May Librarian.	*Detroit, Mich.*	Gm. Ed. Ec.
Howard, Ethel Louisa Assistant Teacher.	*Farmington*	Hy. Ec.
Howard, George Crosby Pastor, Methodist Episcopal Church.	*Orono*	Ed. Eh. Ec.
Jewett, Donald Campbell	*Cherryfield*	Lt. Ms. Eh.
Jewett, Frances Campbell, A. B. District Superintendent.	*Cherryfield*	Lt. Ms. Eh.
Johnson, Chester Cleveland	*Portland*	Eh. Hy. Ec. Ch.
Kelleher, Adrian Fitzgerald	*Orono*	Bl. Ch.
Kelleher, Marie Therese Teacher.	*Orono*	Ed.
Langstroth, Maud, Ph. B. Teacher.	*Rockland*	Lt. Gm. Rm. Hy.

Leary, Herbert Daniel	*E. Boston*	Eh. Ch. Ms. Ec. Hy. Rm.
Leong, Yuen Foo	*Canton, China*	Ed. Eh. Rm.
Littlefield, Joseph Philip	*Ogunquit*	Eh.
Linn, Tse-sheng	*Hong King, China*	Ed. Eh.
Loring, Paul Cushing	*Yarmouthville*	Ch. Eh. Rm.
Lovely, Claude Gerald	*Old Town*	Gm. Hy.
McBride, Herbert Clayton Grover	*Easton*	Ms. Hy.
McGee, Maude Ellen Teacher.	*Orono*	Ed. Eh.
McLeod, Catharene Gould	*Old Town*	Rm.
McSkimmon, Anna Belle	*Bangor*	Ed. Gm. Rm.
Maddocks, Chester Arthur Teacher.	*Ellsworth*	Ps. Ms. Rm.
Mason, William	*Bangor*	Ms.
Morse, Mary Leland	*Orono*	Gm.
Mosher, Frances Belle Teacher.	*Orono*	Ed.
Mullins, William	*Cambridge, Mass.*	Eh. Hy. Ec. Ms.
Nutter, William, A. B. Principal.	*Brookline*	Ps. Ch.
O'Connell, Charles Leslie, M. A. Teacher.	*Milford*	Rm. Ec. Ed.
Parlin, Amber Lorene, A. B. Teacher.	*Bradley*	Bl. Ps.
Parlin, John Crawford	*Norridgewock*	Rm. Ps. Ec. Ch. Ed. Hy.
Peabody, Ellen Holway Teacher.	*Machias*	Gm. Hy.
Pearl, Maud DeWitt, A. B.	*Orono*	Rm.
Reed, Geneva Alice	*Orono*	Ps. Rm.
Robinson, Ralph Sylvester Principal.	*Thomaston*	Ch. Ps.
Rowe, Henry	*Old Town*	Eh. Rm. Lt.
Rowell, Frank Lester District Superintendent.	*Canaan*	Ed. Ec.
Sampson, Albert Edward	*Gorham*	Eh. Ms. Hy.
Schierloh, August Herman Theodore	*Brooklyn, N. Y.*	Gm. Ch. Ed. Hy.
Shaw, Louis Ethelbert	*Orono*	Eh. Ps. Ec.
Small, Allana Butler, A. B. Head of Dept. of English.	*Cherryfield*	Eh. Ed.
Small, Irving Wheelock Principal.	*South Beddington*	Ec. Ed. Eh. Rm.

Small, Lillian Maude Teacher.	*Pownal*	Ch. Ps. Eh. Bl.
Small, Mertice Winton Teacher.	*Stonington*	Lt. Rm. Eh. Bl.
Small, Nathan Houston	*Belfast*	Ms. Rm.
Small, Ralph Hugo	*Oakland*	Rm. Hy. Eh.
Smith, Charles French	*Skowhegan*	Ps. Ec. Ch.
Smith, Edward Henry, B. S. Teacher.	*East Sullivan*	Ch. Ps.
Snyder, Mabel Frances Teacher.	*Orono*	Ed.
Stanley, Winthrop Hamor	*Hulls Cove*	Gm. Ch. Ps. Ms.
Stinchfield, John Field	*Clinton*	Eh. Ed. Ps.
Sturtevant, Arthur Leroy	*Milo*	Bl. Ms.
Surface, Anna Burger	*Orono*	Rm.
Taft, Leonora Ellen Teacher.	*Boston, Mass.*	Ms. Eh. Ed. Ch. Lt.
Taylor, Winifred Emma Teacher.	*Bangor*	Ed. Rm. Ec.
Thomas, Deane Stanley	*Yarmouthville*	Ed. Hy. Eh.
Tibbetts, Julia Jane	*Old Town*	Ms. Lt. Rm. Eh.
Tibbetts, William Herbert Principal.	*Bangor*	Ch. Ms. Ps.
Trickey, Harold Albert Mariner, A. B. Teacher.	*Bangor*	Ps. Ch.
Turner, Dell Ward	*Easton*	Eh. Ch. Rm. Ms. Hy.
Wadleigh, Jennie Mitchell Teacher.	*Old Town*	Lt. Gm.
Wakefield, George Arthur	*Andover*	Ch. Rm. Ec.
Warren, Bessie Gosse Teacher.	*Bangor*	Rm. Ed.
Wass, Clifton E. Superintendent of Schools.	*Sangerville*	Lt. Eh. Ms. Ed.
White, Edgar Eir Teacher.	*Jonesboro*	Lt. Ed. Bl.
Wilbur, Walter Edmund, B. S. Instructor.	*Pembroke*	Ed.
Willard, Eda Gertrude Teacher.	*Strong*	Gm. Ec. Eh. Hy.
Williams, Thomas Huges	*Brownville*	Eh. Ms. Hy.
Winchester, Jeanette	*Corinna*	Ps. Rm.
Winchester, Sidney Hodge	*Corinna*	Eh. Hy. Ms.

Winters, Amos Arthur	*Waterville*	Hy. Rm. Ps. Ec.
Woods, Leroy Leonard Principal.	*Wells*	Ch. Ms. Ed.
Wormwood, Carolyn Imogen	*Old Town*	Rm.
Wu, Maen Chang	*Canton, China*	Ms. Rm.
Young, George Edgar	*Skowhegan*	Eh. Ms. Rm.
Young, Mary Kathleen Assistant Teacher.	*Jacksonville*	Eh. P's. Gm. Ch. Lt.

WINTER COURSES

GENERAL AGRICULTURE

Devine, John M.	Coopers Mills
Edwards, Ara	Lincoln
Hardy, Joseph	Winterport
Heath, Harold Melville	Readfield Depot
Jones, Elmer L.	Litchfield, R. F. D. No. 17
Jones, Leonard Ellwood	Lisbon Falls
Libby, Lara Charles	Lincoln
McGrath, John A.	Gardiner, R. F. D.
McLaughlin, Harry James	Frankfort
Peters, Dr. W. C.	Bangor
Piper, Seavey Allan	Troy
Ross, John Willis	Clark's Mills
Smith, Ernest Clifton	Kennebunkport
Stratton, Chester Winfield	Hancock
Sullivan, Harold W.	Kent's Hill

POULTRY MANAGEMENT

Aubin, Sylvanus L.	Great Works
Baker, Ernest D.	Bangor
Bates, Fred O.	Lagrange
Boyle, John J.	Portland
Burnell, Fred G.	St. Albans, Vermont
Cobb, Norman D.	Newbury, Vermont
Crabtree, Arthur E.	Hancock
Dillingham, Charles A.	Hampden
Flagg, Louis L.	Togus
Freese, F. Drummond	Bangor
Friede, Margaret	St. Petersburg, Russia
French, Adelbert O.	Fort Fairfield
Greeley, Horace P.	Bangor
Heath, Harold M.	Readfield Depot

Higgins, Jr., Frederick A.	Van Buren
Hodges, D. S.	South Brewer
Hoyt, Arthur B.	North Orrington
Kendall, Nathan G.	Orrington
Kendall, William A.	Bangor
Knight, Everett S.	Limerick
Labree, Frank	Bangor
Leslie, E. W.	Millinocket
Linn, Robert D.	Milford
Loudfoot, John	Athens
McKenney, Julia F.	Stillwater
Morton, Albert E.	Gorham
Perry, Earl	Bangor
Perry, Walter F.	Bangor
Pollard, Frank J.	Bangor
Robinson, George S.	Old Town
Smith, Mark B.	Morrisville, Vermont
Stratton, Charles C.	Hancock
Tabor, Thomas T.	Stillwater
Thomas, Edna	Eliot
Thomas, William	Milford
Tupper, Frank H.	Bangor
Tuttle, Edward D.	Newton, Massachusetts
Wadsworth, C. S.	Medford, Massachusetts
Washburn, A. A.	Bangor
Wilson, Jr., Charles W.	Bangor

GENERAL SUMMARY

Faculty

President	1
Professors	34
Associate Professors	7
Assistant Professors	13
Instructors	26
Lecturers	5
Tutors	3
Assistants	4
Additional Instructors in the Summer Term	6
Total	93
Other Officers	19
College of Arts and Sciences	45
College of Agriculture	40
College of Technology	46
College of Pharmacy	32
College of Law	11
Agricultural Experiment Station	23

Members of the general faculty are included in the faculties of the separate colleges when they give courses which are required therein

Students

Graduate Students		7
Seniors		103
Juniors		133
Sophomores		120
Freshmen		158
Special Students		48
Short Pharmacy, Second Year	6	
First Year	13	19
Teachers' Course in Agriculture	1	
School Course in Agriculture, Second Year	5	
First Year	13	19

Summer Term		125
Winter Course in Agriculture		15
Winter Course in Poultry Management		40
College of Law, Graduate Students	28	
Seniors	23	
Juniors	16	
First Year	25	
Special Students	9	101
		888
Duplicated		38
Total		850

CLASSIFICATION BY RESIDENCE

Maine, by counties:		
Androscoggin	32	
Aroostook	29	
Cumberland	91	
Franklin	19	
Hancock	43	
Kennebec	33	
Knox	16	
Lincoln	10	
Oxford	21	
Penobscot	205	
Piscataquis	23	
Sagadahoc	10	
Somerset	23	
Waldo	20	
Washington	44	
York	43	662
Connecticut	6	
Illinois	1	
Massachusetts	129	
Michigan	1	
New Hampshire	15	
New York	12	
Ohio	2	
Pennsylvania	2	
Rhode Island	3	
Tennessee	2	

Texas	2	
Vermont	6	181
China	3	
Porto Rico	1	
Russia	2	
Turkey	1	7
Total		850

Classification by Colleges

College of Arts and Sciences	184
College of Agriculture	158
College of Technology	386
College of Pharmacy	21
College of Law	101
	850

STUDENTS REGISTERED FOR FARMERS' WEEK, 1909

Abbott, Mrs. C. A.	Orono	Bean, Mrs. P. L.	Orono
Adams, E. F.	Garland	Bean, W. M.	Old Town
Adams, M. R.	Canton Point	Belcher, Mrs. C. A.	Orono
Aiken, Mrs. M. B.	Brewer	Bennett, R. P.	Dexter
Allen, C. F.	Bangor	Bennett, S. E.	Sangerville
Allen, George	Orono	Bigelow, Mrs. Emma	Old Town
Ambrose, John	Orono	Bither, Leland	Houlton
Ames, L. L.	Machias	Blooday, J. S. F.	Bangor
Ames, T. S.	Machias	Bond, Mrs. N. W.	Orono
Andrews, G. L. C.	Bangor	Bowles, Harvey	Bangor
Arnold, Mrs. F.	Orono	Boynton, E. W.	Harrington
Atwood, W. F.	Bangor	Bradford, H. L.	Rangeley
Aubin, S. L.	Great Works	Bragg, A. T.	Bangor
Aubin, Mrs. S. L.	Great Works	Bragg, Mrs. F. E.	Bangor
Averill, Mrs. A. C.	Old Town	Brett, B. C.	Auburn
Averill, A. W.	Orono	Bridges, J. H.	Bangor
Averill, Mrs. W. S.	Orono	Bridges, V. P.	Sangerville
Bailey, Wm. E., Jr.	Harmony	Briggs, Mrs. W. E.	South Brewer
Baker, Mrs. G. I.	Bangor	Brockie, Mrs. J. M.	Orono
Balentine, Mrs. E. A.	Orono	Brown, A. H.	Dover
Balentine, George	Waterville	Brown, Mrs. C. B.	Orono
Balentine, Mrs. George	Waterville	Brown, C. O.	Bangor
Bancroft, Mrs. W. K.	Jonesboro	Brown, Mrs. C. M.	Stillwater
Barker, A. C.	Canton	Brown, C. W.	Dover
Barrows, Anna	New York City	Brown, Mrs. E. S.	Bangor
Bartlett, Mrs. J. M.	Orono	Brown, Georgianna	Bangor
Batchelder, T. G.	Garland	Brown, Mrs. H. E.	Bangor
Bates, F. O.	Lagrange	Brown, Mrs. W. A.	Orono
Bates, Gertrude	Lagrange	Browning, Neva	Orono
Bayard, Mrs. C. H.	Orono	Bumpus, W. E.	Mechanic Falls
Benson, Mrs. H. D.	Bangor	Buck, F. E.	Stillwater
Bickmore, E. D.	Stockton Springs	Call, Erwin	Carmel

Call, O. M. Carmel
Callahan, Mrs. E. A. Rumford Falls
Cane, Clifford Bar Harbor
Campbell, Josephine Orono
Campbell, Mrs. P. A. Orono
Carleton, Mrs. F. A. Bangor
Carter, C. E. Bangor
Chamberlain, Lizzie Orono
Chandler, Mrs. A. J. Bangor
Chase, Mrs. G. D. Orono
Chase, Mrs. Lillian Kents Hill
Chilcott, Rebecca Bangor
Chilcott, Mrs. L. S. Bangor
Clark, Alice Hampden
Clark, B. E. Bar Harbor
Clark, C. L. Hampden
Clark, Mrs. C. L. Hampden
Clayton, W. Z. Bangor
Cleaves, F. W. Sangerville
Clements, W. E. Monroe
Clements, W. O. Milo
Cliffors, Mrs. A. L. Orono
Clifford, Ernest Orono
Colburn, Grace Orono
Colburn, Mrs. Maria Orono
Colburn, Marion Bangor
Colvin, Caroline Orono
Condon, W. H. East Newport
Conser, Mrs. H. N. Orono
Cook, Mrs. P. H. Bangor
Craig, J. M. Orono
Craig, Mrs. Wallace Orono
Crane, Mrs. L. F. Orono
Crawford, W. B. Hudson
Creelman, G. C. Guelph, Ontario
Crehore, B. F. Lagrange
Crosby, Florence West Levant
Crosby, R. H. West Levant
Cross, Miller Trenton, N. J.
Curran, Daniel South Brewer
Curtis, Mrs. W. M. Orono
Danforth, Agnes H. Bangor
Danforth, C. E. Bangor
Davee, Mrs. E. W. Orono
Davis, Clara Greenville
Davis, E. J. Ellsworth
Davis, Mrs. E. J. Ellsworth
Davis, H. W. Oxford
Davis, J. F. Hampden Corner
Day, H. N. Boston, Mass.
Dean, Mrs. J. B. Ellsworth
Dillingham, C. A. Hampden
Dillingham, Mrs. C. A. Hampden
Dow, Mrs. M. A. Plymouth
Drew, Mrs. Gilman Orono
Drew, M. N. Portland
Dunham, L. South Brewer
Dunn, Mrs. C. J. Orono
Dunn, M. Hermon
Eddy, Mrs. F. A. Bangor
Eddy, Virginia Orono
Edwards, Ard Lincoln
Elder, G. K. Lewiston
Eldridge, B. E. Brewer
Emerson, Mrs. M. A. Bangor
Estabrooke, E. R. Orono
Estabrooke, Mrs. K. C. Orono
Evans, Edward Belfast
Evans, Mrs. Edward Belfast
Farnham, H. E. Bangor
Farnsworth, Carrie Jonesboro
Farrington, J. L. Brewer
Fernald, M. C. Orono
Fernald, E. Bangor
Fessenden, S. D. Washington, D. C.
Fessenden, Mrs. J. H. Orono
Findlen, Joseph Fort Fairfield
Fits, Mrs. A. J. Kenduskeag
Fitz, Eva Kenduskeag
Fling, D. A. Old Town
Fogg, F. W. Dedham
Fogg, G. P. Hulls Cove
Fogg, H. A. Boston, Mass.
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THE MAINE BULLETIN

VOL. XIII OCTOBER, 1910 NO. 2

CATALOG

OF THE

UNIVERSITY OF MAINE

1910-1911

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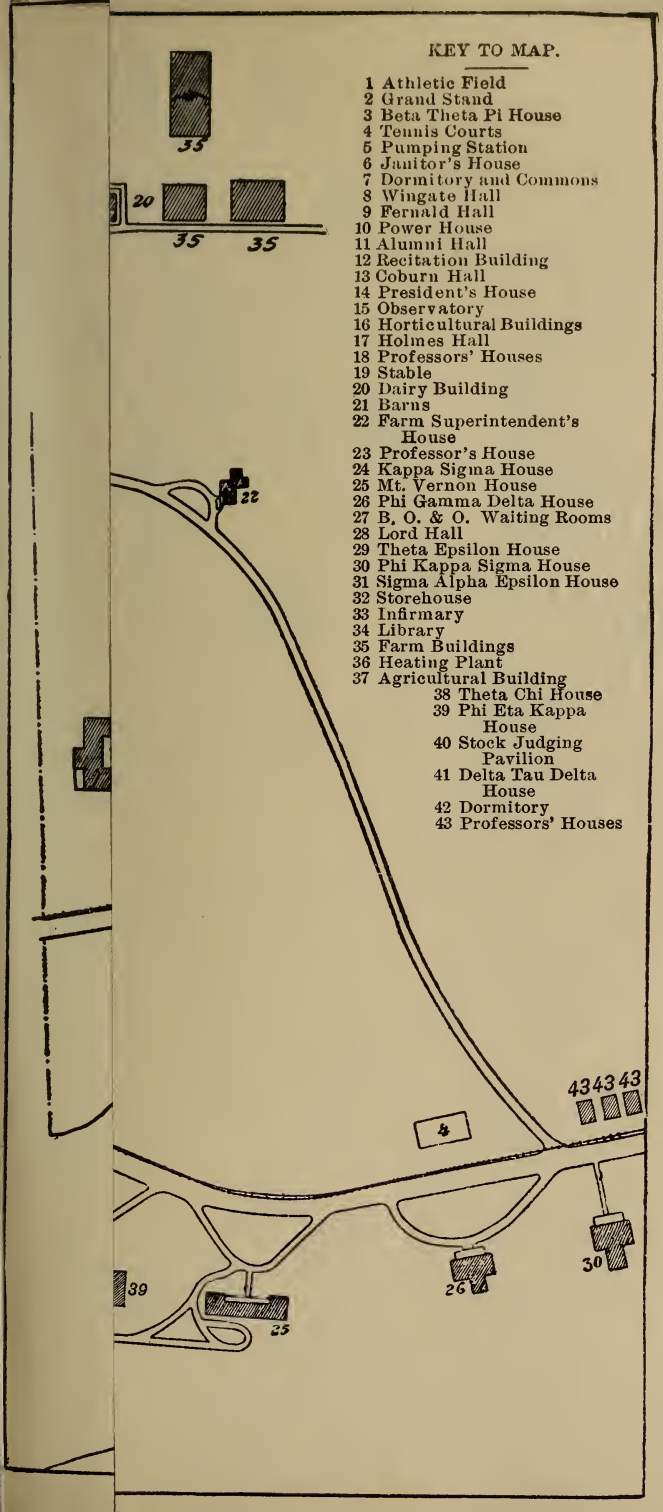
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2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Dormitory and Commons
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Buildings
17 Holmes Hall
18 Professors' Houses
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Agricultural Building
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
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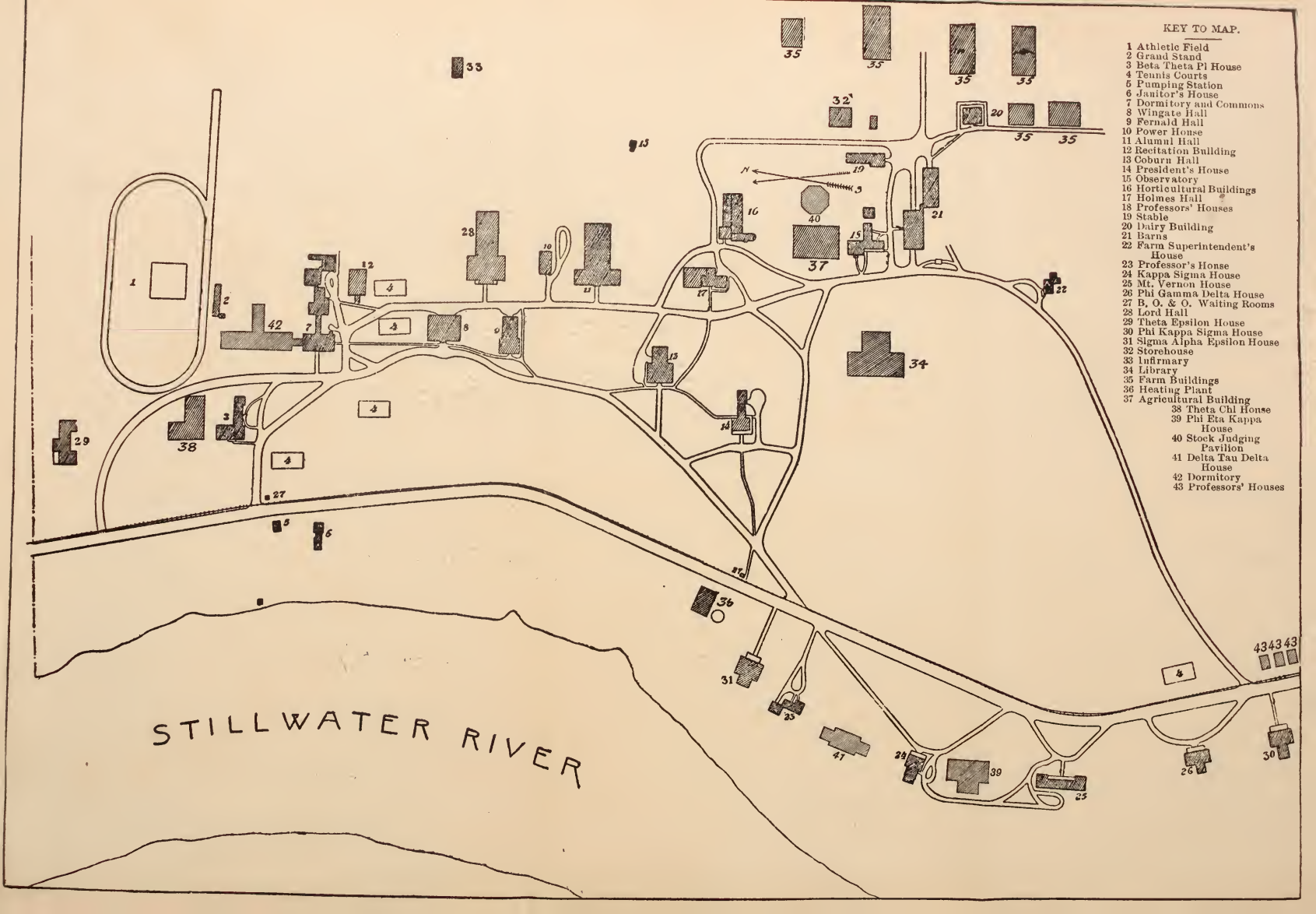
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43 Professors' Houses
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1910-1911

ORONO, MAINE

AUGUSTA
KENNEBEC JOURNAL PRINT
1910

1910	1911	1911	1912

JULY

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CALENDAR

FALL SEMESTER, 1910

September 16, 17, 19, 20,	Arrearage examinations.
September 16, 17, 19, 20,	Entrance examinations.
September 21, Wednesday,	Registration begins, 1.30 P. M.
September 22, Thursday,	First chapel service, 11 A. M.
November 22, Tuesday,	Meeting of the Board of Trustees.
November 23, Wednesday,	Thanksgiving recess begins, 5.30 P. M.
November 28, Monday,	Thanksgiving recess ends, 12 M.
December 9, Friday,	Sophomore prize declamations.
December 22, Thursday,	Christmas recess begins, 5.30 P. M.

1911

January 2, Monday,	Christmas recess ends, 7.45 A. M.
February 3, Friday,	Fall semester ends.

SPRING SEMESTER, 1911

February 4, Saturday,	Registration.
February 6, Monday,	Spring semester begins.
February 22, Wednesday,	Washington's birthday, a holiday.
April 3, Monday,	Spring recess begins, 7.45 A. M.
April 10, Monday,	Spring recess ends, 7.45 A. M.
April 19, Wednesday,	Patriot's day, a holiday.
May 1, Monday,	An outline of Theses must be passed in.
May 30, Tuesday,	Memorial day, a holiday.
June 5, Monday, 12 o'clock,	Complete Theses must be passed in.
June 7, 8, 9, 10,	Entrance examinations.
June 7, Wednesday,	8.00 A. M. Algebra. Elementary Algebra (Short Pharmacy). 10.00 A. M. Chemistry. Botany. 1.30 P. M. Latin. 4.30 P. M. Roman History.
June 8, Thursday,	8.00 A. M. Arithmetic (Short Pharmacy). Solid Geometry. 10.00 A. M. French. German. Geography

		1.30 P. M. English. English Grammar. (Short Pharmacy).
		4.30 P. M. English History.
June	9, Friday,	8.00 A. M. American History and Civil Government. American History (Short Pharmacy). Trigonometry.
		10.00 A. M. Plane Geometry.
		1.30 P. M. Physics.
June	10, Saturday,	8.00 A. M. Greek. Physiology.
		10.00 A. M. Greek History.
		1.30. P. M. Physiography.
June	11, Sunday,	Baccalaureate address.
June	12, Monday,	Convocation.
		Class day.
		Reception by the President.
June	13, Tuesday,	Meeting of the Board of Trustees.
		Receptions by the Fraternities.
		Alumni luncheon; alumnae luncheon.
		Address before the Phi Kappa Phi Society.
June	14, Wednesday,	Meeting of the Alumni Association.
		COMMENCEMENT.
		Commencement dinner.
		Commencement concert.
July	5, Wednesday,	Summer term begins.
August	11, Friday,	Summer term ends.

FALL SEMESTER, 1911

September	15, 16, 18, 19,	Arrearage examinations.
September	15, 16, 18, 19,	Entrance examinations.
September	15, Friday,	8.00 A. M. Algebra. Elementary Algebra (Short Pharmacy).
		4.30 P. M. English History. Botany.

		1.30 P. M. Latin.
		4.30 P. M. Roman History.
September	16, Saturday,	8.00 A. M. Arithmetic (Short Pharmacy). Solid Geometry.
September	16, Saturday,	10.00 A. M. French. German. Geography (Short Pharmacy).
		1.30. P. M. Engilsh. English Grammar (Short Pharmacy).
		4.30 A. M. English History.
September	18, Monday,	8.00 A. M. American History and Civil Government. American History (Short Pharmacy). Trigonometry.
		10.00 A. M. Plane Geometry.
		1.30. P. M. Physics.
September	19, Tuesday,	8.00 A. M. Greek. Physiology.
		10.00 A. M. Greek History.
		1.30. P. M. Physiography.
September	20, Wednesday,	Registration begins, 1.30 P. M.
September	21, Thursday,	First chapel service, 11 A. M.
November	21, Tuesday,	Meeting of the Board of Trustees.
November	22, Wednesday,	Thanksgiving recess begins, 5.30 P. M.
November	27, Monday,	Thanksgiving recess ends, 12 M.
December	8, Friday,	Sophomore prize declamations.
December	22, Friday,	Christmas recess begins, 5.30 P. M.

1912

January	2, Tuesday,	Christmas recess ends, 7.45 A. M.
February	2, Friday,	Fall semester ends.

SPRING SEMESTER, 1912

February	3, Saturday,	Registration.
February	5, Monday,	Spring semester begins.
June	12, Wednesday,	COMMENCEMENT.

CALENDAR OF THE COLLEGE OF LAW

1910

October 5, Wednesday, Fall term begins.
December 21, Wednesday, Fall term ends.

1911

January 4, Wednesday, Winter term begins.
March 15, Wednesday, Winter term ends.
March 22, Wednesday, Spring term begins.
June 14, Wednesday, COMMENCEMENT.
October 4, Wednesday, Fall term begins.
December 20, Wednesday, Fall term ends.

1912

January 3, Wednesday, Winter term begins.
March 13, Wednesday, Winter term ends.
March 20, Wednesday, Spring term begins.
June 12, Wednesday, COMMENCEMENT.

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Term expires April 13, 1912

Hon. SAMUEL WADSWORTH GOULD, B. S., Clerk — Skowhegan
Term expires April 16, 1914

EDWIN JAMES HASKELL, B. S., — Westbrook
Term expires December 31, 1910

Hon. JOHN ALFRED ROBERTS, M. A. — Norway
Term expires May 31, 1911

Hon. WILLIAM THOMAS HAINES, B. S., LL. B., LL. D. — Waterville
Term expires April 24, 1913

Hon. SUMNER PETER MILLS — Stonington
Term expires September 10, 1914

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Term expires April 2, 1915

Hon. CHARLES LESTER JONES — Corinna
Term expires April 17, 1917

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Trustees WINSLOW, HASKELL, and OAK

TREASURER

Hon. CHARLES JOHN DUNN — Orono

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CHARLES LESTER JONES, Corinna	
SAMUEL WADSWORTH GOULD, B. S., Skowhegan	
AUGUSTUS WILLIAM GILMAN, Foxcroft	
	Commissioner of Agriculture
EUGENE HARVEY LIBBY, Auburn	*State Grange*
CHARLES S. POPE, Manchester	*State Pomological Society*
RUTILLUS ALDEN, Winthrop	*State Dairymen's Association*
JAMES MONROE BARTLETT, M. S.	*Members of the Station Staff*
EDITH MARION PATCH, M. S.	
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CHARLES EDWARD LEWIS, PH. D.	
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WALTER WEIDENFELD BONNS, B. S.	

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Treasurer, Albert H. Brown, B. S., 1880, Oldtown, Maine..... 1910

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Paul D. Sargent, B. C. E., 1896, Augusta, Maine..... 1911
Albert H. Brown, B. S., 1880, Oldtown, Maine..... 1912
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John M. Oak, B. S., 1873, Bangor, Maine..... 1913
Louis C. Southard, B. S., 1875, M. S., LL. D., Boston, Mass.... 1913
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Charles S. Bickford, B. S., 1882, Belfast, Maine..... 1915
George E. Thompson, B. C. E., 1891, Orono, Maine..... 1915

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Representing the College of Arts and Sciences

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Representing the College of Law

Freeland Jones, LL. B., 1900, Bangor, Maine..... 1911

Representing the College of Pharmacy

[Vacancy] 1914

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Secretary, F. L. Russell, '85, Orono
Corresponding Secretary, R. K. Jones, '86, Orono
Treasurer, A. H. Brown, '90, Oldtown
Necrologist, J. N. Hart, '85, Orono
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The West Maine Association

President, S. W. Bates, '75, Portland
Secretary and Treasurer, S. E. Patrick, '03, Gorham

The Boston Association

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Vice-President, Fred O. Stevens, '06, 975 Commercial St., East Weymouth, Mass.
Secretary and Treasurer, Shirley P. Graves, '03, 30 Court St., Boston, Mass.

The New York Association

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Vice-President, Walter D. Jack, '93, 575 Westfield Ave., Elizabeth, N. J.
Secretary and Treasurer, A. W. Stephens, '99, 150 Springvale Ave., East Orange, N. J.

The Washington (D. C.) Association

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Secretary and Treasurer, H. P. Gould, '93, U. S. Dept. Ag.

The Penobscot Valley Association

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Vice-President, Dr. W. A. Bumps, '75, Dexter
Secretary and Treasurer, J. H. McClure, '05, Bangor
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Vice-President, R. E. Bucknam, '07
Secretary and Treasurer, H. E. Cole, '02, 1023 Park Building, Pittsburg, Pa.
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Secretary, H. E. Duren, '02, 306 Lafayette St.
Treasurer, H. F. Hoxie, '99, 940 State St.
Executive Committee, C. W. Bartlett, '01, H. P. Mayo, '99, H. E. Duren, '02

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Secretary, Ernest C. Butler, '01, Skowhegan
Treasurer, Samuel J. Foster, '03, Oakland
Executive Committee, J. H. Burleigh, '87, E. C. Butler, '01, H. E. Cook, '00

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CHARLES DAYTON WOODS, Director of the Experiment Station
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*THE FACULTY OF INSTRUCTION AND INVESTIGATION

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President (*Term of office ended September 1, 1910*)

ROBERT JUDSON ALEY, Ph. D., LL. D. Campus
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Chemist in the Experiment Station

* Arranged in groups in order of seniority of appointment.

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Dean of the College of Technology

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Professor of History

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Professor of Education

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Plant Pathologist in the Experiment Station

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Professor of Economics and Sociology

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Professor of German

GUY ANDREW THOMPSON, M. A. College Street
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WINDSOR PRATT DAGGETT, PH. B. College Street
Professor of Public Speaking

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64 Grove Street, Bangor
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Professor of Agronomy and Farm Manager

OSKAR AUGUSTUS JOHANNSEN, PH. D. 3 Pond Street
Entomologist in the Experiment Station

MINTIN ASBURY CHRYSLER, PH. D. 1 Pond Street
Professor of Botany

VICTOR RAY GARDNER, M. S. A. Campus
Professor of Horticulture
ACTING HEAD OF THE COLLEGE OF AGRICULTURE

JOHN MANVERS BRISCOE 14 Bennoch Street
Professor of Forestry

LEON STEPHEN MERRILL, M. D. 5 Pond Street
DIRECTOR OF AGRICULTURAL EXTENSION WORK

EDGAR RAMEY WINGARD, M. S. University Inn
DIRECTOR OF PHYSICAL CULTURE AND ATHLETICS

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Professor of Education (Summer Term)

RAYMOND GARFIELD GETTELL, M. A. Hartford, Conn.
Professor of History (Summer Term)

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Associate Entomologist in the Experiment Station
FRANK MACY SURFACE, PH. D. Myrtle Street
Associate Biologist in the Experiment Station
HERMAN HERBERT HANSON, M. S. Forest Street
Associate Chemist in the Experiment Station
CHARLES EDWARD LEWIS, PH. D. 76 North Main Street
Associate Plant Pathologist in the Experiment Station
CHARLES WILSON EASLEY, PH. D. 7 Main Street
Associate Professor of Chemistry
WALTER WEIDENFELD BONNS, B. S. Main Street
Associate Horticulturist in the Experiment Station

EDGAR MYRICK SIMPSON, B. A. 31 Highland Avenue, Bangor
Assistant Professor of Law
ANDREW PAUL RAGGIO, PH. D. Oak Street
Assistant Professor of Romance Languages
WALTER MOLBRAY CURTIS, S. B. 51 Main Street
Assistant Professor of Mechanical Engineering
* HARLEY RICHARD WILLARD, M. A. 40 Main Street
Assistant Professor of Mathematics
LEON ELMER WOODMAN, PH. D. 20 Mill Street
Assistant Professor of Physics
WILLIAM ARCHIBALD BROWN, B. S. A. Mill Street
Assistant Professor of Animal Industry
ARCHER LEWIS GROVER, B .S. 40 Main Street
Assistant Professor of Drawing
CHARLES PRESTON WEAVER, M. A. Oak Street
Assistant Professor of English
LAURA COMSTOCK University Inn
Assistant Professor of Domestic Science

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*Absent on Leave.

PAUL LEONARD BEAN, B. S. 28 North Main Street
Assistant Professor of Civil Engineering
GEORGE EDWARD SIMMONS, M. S. Forest Avenue
Assistant Professor of Agricultural Engineering and Farm Management
TRUMAN LEIGH HAMLIN, M. A. Stillwater
Assistant Professor of Mathematics

INSTRUCTORS

GEORGE HENRY WORSTER, LL. M. 234 Center Street, Bangor
Instructor in Sales and Private Corporations
BARTLETT BROOKS, B. A., LL. B. 10 Columbia Building, Bangor
Instructor in Contracts and Negotiable Paper
EVERETT WILLARD DAVEE 50 Mill Street
Instructor in Wood and Iron Work
WALTER EVERETT PRINCE, M. A. 26 Main Street
Instructor in English
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Instructor in Mathematics
HARRY NEWTON CONSER, M. S., M. A. Oak Street
Instructor in Botany
MAYNE ROSE CURTIS, M. A. 24 Main Street
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ALBERT GUY DURGIN, M. S. Middle Street
Assistant Chemist in the Experiment Station
WALTER ELWOOD FARNHAM Forest Street
Instructor in Drawing
ROBERT RUTHERFORD DRUMMOND, PH. D. University Inn
Instructor in German
BERTRAND FRENCH BRANN, B. S. 227 Essex Street, Bangor
Instructor in Chemistry
JAMES RENFREW DICE, B. S. Campus
Instructor in Animal Industry
WINTHA RUDOLPH PALMER, B. S. Campus
Instructor in Horticulture

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* Absent on Leave.

SHERMAN DANIEL CHAMBERS, B. S. — Oak Street
Instructor in Mathematics

WALTER EDMUND WILBUR, B. S. — 86 Main Street
Instructor in Mathematics

ERNEST CONANT CHESWELL — 57 Main Street
Instructor in Engineering Laboratory Practice

EUGENE LOUIS RAICHE — Cambridge, Mass
Instructor in French (Summer Term)

ALBERT THEODORE CHILDS, B. S., E. E. — 55 Main Street
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HELENE JULIE RAICHE — Cambridge, Mass
Instructor in French (Summer Term)

ALICE MIDDLETON BORING, PH. D. — University Inn
Instructor in Zoölogy

ERNEST CLAUDE DREW, B. S. — 80 Main Street
Instructor in Physics

LLOYD MEEKS BURGHART, B. A. — 6 Pine Street
Instructor in Chemistry

VICTOR ALVIN KETCHAM, B. A., LL. B. — 80 Main Street
Instructor in English

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Instructor in Civil Engineering

HAROLD MERTON ROYAL, B. S. — Main Street
Instructor in Physics

ALVIN KIMBALL BURKE, B. S. — Park Street
Assistant Chemist in the Experiment Station

RAYMOND PRATT NORTON, B. S. — 154 Essex Street, Bangor
Assistant Chemist in the Experiment Station

ARTHUR MOSES BUSWELL, B. A. — 40 Main Street
Instructor in Industrial Chemistry

ROYDEN LINDSAY HAMMOND — 59 Main Street
Seed Analyst and Photographer in the Experiment Station

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Tutor in Civil Engineering

JOHN NEAL PHILBROOK, B. S. — North Main Street
Tutor in Civil Engineering

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Resident Lecturer on Common Law Pleading and Maine Practice

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LUCILIUS ALONZO EMERY, M. A., LL. D. Ellsworth
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HERBERT MILTON HEATH, M. A. Augusta
Lecturer on Cross-Examinations

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Commercial Secretary

BERTHA COREY WHITTEMORE College Street
Cataloger in the Library

HELEN WAUGH STOBIE College Street
Assistant in the Library

JULIA LYDIA CROCKER 155 Brunswick Street, Old Town
Assistant in the Library

EMPLOYEES

CYRUS SKILLINGS WINCH 43 Elm Street, Bangor
Taxidermist and Assistant Curator of the Zoological Collections

ANDREW MAYHEW SHAW College Street
Superintendent of Grounds and Greenhouses

JOHN NICOL RATCLIFFE Campus
Foreman of the Farm

FREDERICK BRADFORD, B. S. College Street
Florist

HALSEY RICHARDSON WING — Campus
Head Janitor

GEORGE ABRAHAM COLBURN — Bennoch Street
Head Carpenter

GRACE MARY COLBURN — Bennoch Street
Cashier

FRANK EVANS OAK — 239 Cedar Street, Bangor
Assistant to the Treasurer, and Bookkeeper

JENNIE HAMLIN WAITE — University Inn
Secretary to the President

VIVIAN AUGUSTA PAGE — 21 Pine Street
Stenographer in the College of Agriculture

BLANCHE FOLSOM POOLER — Stillwater
Stenographer in the Experiment Station

ADDIE WEED — Veazie
Stenographer to the Deans and the Secretary

LOTTIE ESTELLE McPHETERS — 7 Main Street
Computer in the Experiment Station

ALICE WOODS AVERILL — 51 Mill Street
Laboratory Assistant in the Experiment Station

LEIGH IRVING HARVEY — Bangor
Stenographer in College of Law

MARY ELLEN SWEATTE — Campus
Matron of the Mt. Vernon House

HENRY ATLEIGH MILLET — Campus
Meteorological Observer in the Experiment Station

WALTER ANDERSON — Campus
Poultryman in the Experiment Station

WILLIAM SHAW — Campus
Herdsman

JOHN SUMMERS — Campus
Laboratory Assistant in the Experiment Station

HARRY ALEXANDER — Campus
Laboratory Assistant in the Experiment Station

WELLINGTON SINCLAIR — Monmouth
Superintendent of Experiment Station Farm, Monmouth, Maine

*STANDING COMMITTEES OF THE FACULTY

Admission to College

The President, the Deans (sub-committee), Professor Chase, Professor Chrysler, Professor Colvin, Professor Drew, Professor Gardner, Professor Gray, Professor Jewett, Professor McKee, Professor Merrill, Professor Segall, Professor G. W. Thompson, Professor Weston.

Advanced Degrees

Professor Chase, Professor Chrysler, Professor Colvin, Professor Gray, Professor Walz, Professor Weston

Approved Tutors

Professor Hart, Secretary Balentine

Athletics

Professor Jones, Professor Bean, Professor Boardman

Attendance

Professor Hart, Professor C. B. Brown, Professor Stevens

Bachelor's Degree

Professor Stevens, Professor Colvin, Professor Weston

Bulletins

Professor Jones

Catalog

Professor Stevens

Courses

Professor Hart, Professor Boardman, Professor Drew, Professor Stevens

Delinquent Students

Professor Boardman, Professor Daggett, Professor Ganong, Professor Grover, Mr. Reed

Entrance Examinations

Professor Stevens

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* The member whose name is printed first is the chairman of the committee.

Standing Committees

Fitting Schools

Professor Chase, Professor Chrysler, Professor Davidson, Professor Easley, Professor Gray, Professor Hart (Secretary), Professor Huddilston, Professor Stevens, Professor G. A. Thompson, Professor G. W. Thompson.

Health

Professor Russell, Professor Colvin, Professor Comstock, Professor Jackman, Director Wingard

Honors

Professor Stevens, Professor Huddilston, Professor G. A. Thompson

Library

Professor Jones, Professor Colvin, Professor Ganong, Professor Jackman

Publicity

Professor Gray, Professor Chase

Registration

Professor Stevens, Professor Drew, Professor Hart

Rules

Professor Hart, Professor Jewett, Professor Stevens, Director Woods

Student Advisers

For freshmen in all courses: Professor Hart

For all other students: the heads of the departments in which their major subjects are taken

Student Employment

Mr. Gannett, Professor Bell, Professor Woodman

Student Organizations Other than Athletics

Professor Jones, Professor Daggett, Professor G. W. Thompson

Summer Term

Professor Stevens

Tuition Loans

The President, Professor C. B. Brown, Professor Hart

The University Council

Faculty Members: The President, Professor Boardman, Professor Hart, Professor Stevens

THE UNIVERSITY OF MAINE

HISTORY

The University of Maine is an integral part of the public educational system of the state. It completes the work done in the high school, as the work in the high school completes that of the primary and grammar schools.

Through appropriations by the state and the United States it furnishes instruction in the Liberal Arts and Sciences, Agriculture, Engineering, Forestry, Pharmacy, and Law.

By an Act of Congress, approved July 2, 1862, by President Lincoln, it was provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out the purposes of the act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that, in addition to the studies especially required by the Act of Congress, the college should teach such other studies as its facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public land, from which the University has realized an endowment fund of $118,300. This has been increased by a bequest of $100,000 from Abner Coburn of Skowhegan, who was for many years President of the Board of Trustees. The state pays to the University five per cent. on the fund realized from the public lands, and four per cent. on the Coburn Bequest. The town of Orono contributed $8,000, and the town of Oldtown $3,000, for the purchase of the site on which the buildings stand. The state has appropriated about $450,000 for the material equipment. The present value of the buildings and equipment belonging to the University, including gifts other than those made by the state, is estimated at $750,000.

Under an Act of Congress, approved March 2, 1887, the University receives $15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress, approved August 30, 1890, the University receives $25,000 annually for its more complete endowment and maintenance.

Under an Act of Congress, approved March 17, 1906, the University receives $15,000 a year for the maintenance of the Agricultural Experiment Station.

By an amendment to the Agricultural Appropriation Bill, approved March 4, 1907, the University received $5,000 in the year 1907, and receives an addition of a like amount each year until the sum reaches $25,000.

Under an Act of the Legislature, approved April 2, 1909, the University receives $100,000 a year for each of the years 1909, 1910, 1911, and 1912, for buildings and maintenance. Student fees and miscellaneous receipts complete the income.

LOCATION

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, an arm of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the state.

The cars of the Bangor Railway and Electric railroad run through the University grounds. Visitors may find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located in the Exchange Building, Bangor, at the corner of Exchange and State streets.

THE BUILDINGS AND THEIR EQUIPMENT

Oak Hall.—In the northern part of the campus is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak, of Garland, for many years a useful member of the board of trustees. It contains forty-nine rooms for students, and is furnished with bath rooms. It is heated by steam, supplied with water, and lighted by electricity.

Fernald Hall.—This building, named in honor of Merritt C. Fernald, LL. D., President of the University from 1879 to 1893, is a two-story brick building, containing seventeen rooms devoted to the departments of chemistry and pharmacy. The balance rooms, a small lecture room, three offices, and the laboratory for advanced students are on the ground floor. Upon the second floor are the large lecture room, the laboratory for freshman work, a recitation room, an office, and the supply room. Under the roof are arranged the mineralogical laboratory, dark rooms, and a laboratory for qualitative analysis. An assay laboratory, a laboratory for water and gas analysis, a room for certain work in physical chemistry, and store rooms are in the basement.

Coburn Hall.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn, of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. In the basement are located a laboratory for animal and plant physiology, the

taxidermist's laboratory, and the University Exchange. Connected with the basement is a small greenhouse for the use of the biological department. On the first floor are three recitation rooms, a research zoölogical laboratory, and part of the museum. On the second floor are the botanical and zoölogical laboratories and lecture room and part of the museum. On the third floor are recitation rooms for the departments of economics, philosophy, and German, the psychological laboratory, and the remainder of the museum.

Wingate Hall.—One of the most conspicuous buildings on the campus, Wingate Hall, named in honor of William P. Wingate, of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied chiefly by the departments of civil engineering, physics, and mechanics and drawing. On the ground floor are four recitation rooms, instrument rooms, an optical room, and the offices of the professors of civil engineering and mechanics and drawing. On the second floor are the offices and recitation rooms of the professors of physics, Greek, and Latin, two physical laboratories, and the physical apparatus rooms. On the third floor are two large, well lighted drawing rooms for the use of the departments of civil engineering and mechanics and drawing, and a filing room containing a collection of blue prints belonging to the department of civil engineering. In the basement are the electrical laboratory and the photometer room of the department of physics, and the cement testing laboratory. On the fourth floor is another photometer room for the use of students in physics.

Alumni Hall.—To the northeast of Coburn Hall stands Alumni Hall, erected in 1900. The front part contains on the ground floor the offices of the President, the Dean of the University, the Secretary, the Cashier, the Trustees' Room, and two recitation rooms for the use of the mathematical department; the second floor contains the university chapel with a large pipe organ in the choir gallery, and the drill hall and gymnasium with a running track in the gallery. The dimensions of the drill hall and gymnasium are 100 x 62 feet. This room is encircled by a 9-foot running track suspended from the roof. As a gymnasium it is equipped with complete apparatus of the most approved kind. Under the drill hall are the offices of the military instructor and the physical director, the baseball cage, lockers, lavatories, store rooms, etc.

The Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a combined transit instrument and zenith telescope of three-inch aperture recently constructed by Bomberg, and a Repsold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

Lord Hall.—This building, named in honor of Honorable Henry Lord, Ex-President of the Board of Trustees, is designed for the departments of mechanical and electrical engineering. It consists of a main part, 82 x 56 feet in area and two stories in height, and an ell, 125 x 42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc. For tests of materials there are two Riehle power operated testing machines, one of 60,000 lbs. capacity, for tensile, and compressive tests, and one of 150,000 lbs. capacity for tensile, compressive, and transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necessary for the study of engine performance.

The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. These are all well equipped. The forge shop had complete new apparatus installed a few years ago. The forges are of the Sturtevant down draft type. New benches and new lathes have just been installed in the pattern shop, and also new lathes of the highest type in the machine shop.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volt alternating current system to direct current by means of rotary converters and belted alternating current motors driving direct current generators. In addition to volt-meters, ammeters, and watt-meters for both direct and alternating currents, the equipment includes circuit breakers, various types of transformers, three 7½ kilowatt special auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self

starting rotary converters, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Holmes Hall.—This is a two-story brick building, 81 x 48 feet, standing south of Alumni Hall. It is occupied by the Maine Agricultural Experiment Station and is arranged as follows:

On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, drugs, and fertilizers; the laboratory for vegetable pathology; and the biological laboratories. The general office and mailing room, the director's office, the laboratory for seed testing and photography, the entomological laboratories, and the library are on the second floor.

In the basement are rooms for the boiler, for the gas machine, for the grinding and preparation of samples, and for the calorimeter; culture and preparation rooms used by the plant pathologist, and rooms for the storage of fuel, chemicals, and glass ware. The large attic is used for the storage of samples and supplies. With the exception of the thermometers and rain gauge, the meteorological apparatus is in this building. The building is connected with the steam heating plant, supplied with gas and electricity, and is thoroughly equipped with apparatus for the work of agricultural investigation.

An attached greenhouse is used by the entomologist and plant pathologist.

Library.—The library, completed in 1906, is the most attractive building on the campus. For its erection and furnishing the sum of $55,000 was given by Mr. Andrew Carnegie.

The building is two stories above a basement which is almost entirely above the ground level. The stacks are in the rear of the main building, and have a capacity of 75,000 volumes, with a cataloging room on the first floor, opening from the librarian's office. The first floor of the main building contains an entrance hall, open to the dome; on one side is a periodical room, in the rear of which is a room for reserved books, and on the other side is a reference room which leads to the librarian's office; there is also a women's room on this floor. The second floor has a gallery surrounding a central open space, and on its walls, and in the entrance hall below, are the art collections; on the second floor also are

a lecture hall, with a seating capacity of one hundred and twenty-five, and five seminar rooms. The basement contains a newspaper room, a club room in which meetings of various student organizations are held, a janitor's room, a store room, and a men's room.

The library is well lighted and thoroughly ventilated. Each floor of the stacks and each seminar room is connected by an intercommunicating telephone system with the librarian's office, the assistant's desk, and the janitor's room; and the librarian's office has telephone connection with the university branch exchange.

The Power House.—This wooden building, 30 x 56 feet, north of Alumni Hall, formerly the power and heating plant of the University, is now used exclusively for laboratory purposes in connection with the department of mechanical engineering. It contains two boilers, a one hundred and fifty horse-power Babcock and Wilcox and an eighty-five horse-power Heine, a fifty horse-power Corliss engine, a fifteen horse-power Otto gasolene engine, a plain slide valve engine, and two dynamos with operating switchboard.

The Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. It is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

The Dairy Building.—The Dairy Building, 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is supplied with hot and cold water. Power is furnished by a six horse-power engine.

Central Heating Plant.—The new central heating station is located across the car tracks from the university buildings, just above the Sigma Alpha Epsilon house, and on low ground so that practically all the buildings to be connected will drain by gravity to the plant, thus saving the pumping or lifting of the returns.

The station is a plain red brick structure, without any attempt at ornamentation, but of good proportions, and large enough to provide room for present needs and allow for considerable future extensions.

The pump pit is 8 x 17½ feet, the engine room 17½ x 40 feet, the boiler room 40 x 42 feet, and the proposed coal pocket 32 x 42 feet.

The chimney is 100 feet high, and 60 inches in diameter. It is of radial brick construction and stands on a solid ledge. The station equipment consists of three 72-inch boilers, 17 feet 6 inches long, with 16 foot tubes. They are of butt joint construction, with double cover strips, and capable of running 150 lbs. pressure if necessary. In connection with the boiler plant there are two 6 x 4 x 6 inch boiler feed pumps, with receiving tank, for handling the return water of condensation as it comes back from the buildings, and putting it into the boilers. All necessary provisions have been made for the future installation of engines and generators to furnish light and power for the University when practicable. This plant supplies heat to nearly all the university buildings.

The Agricultural Building.—The Agricultural Building is the largest building on the campus. The ground plan measures 63 x 100 feet and the building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors including a well lighted basement for lecture rooms and laboratories.

On the first floor are the offices of the Dean of the College of Agriculture, the faculty room and library, the offices and class rooms of the professors of agricultural chemistry, animal industry, and poultry husbandry, and the office and filing room of the extension department.

On the second floor are the offices of the departments of agronomy, forestry, and domestic science, the agronomy and forestry lecture rooms, farm crops laboratory with seed and plant storage rooms, bacteriological laboratory, and the kitchen and dining room of the department of domestic science.

Across the front of the building on the third floor are the office, class room, refrigerator, and laboratories of the department of horticulture.

The remaining half of this floor is occupied by a large lecture room and two draughting rooms separated from the larger room by folding doors, so that the three rooms can be thrown into a large auditorium at any time.

The basement is built high above the grade line so that light and ventilation are good. It contains the office, lecture room, and operating room of the department of veterinary science, timber testing laboratory, a dry kiln, and a wood storage room for forestry, the agricultural chemistry laboratory, soil physics laboratory, a spraying laboratory, a laundry for the department of domestic science, dark rooms for photography, and lavatories.

The interior finish and furniture are in dark mission stain, and the building is equipped with electric lights, elevator, hot and cold water, gas, and high pressure steam for laboratory work.

The Stock Judging Pavilion.—Located about fifty feet to the rear of the Agricultural Building is an octagonal structure fifty feet in diameter. It is built of the same materials as the larger building and is used for scoring and judging stock. In the center of the structure is a ring twenty-five feet in diameter, and surrounding this ring are six rows of seats arranged in amphitheatre style. The building has a seating capacity of about six hundred and can be used for meetings too large for any of the rooms in the Agricultural Building.

The New Dormitory.—The new dormitory in course of construction is a brick building with stone trimmings, located north of Oak Hall and connected with it by a covered passage. The building is 35 feet wide and 168 feet long. It has four stories founded on a high, well lighted concrete basement, in which are located a dining room 32 x 90 feet, recreation room 26 x 32 feet, waiters' room 12 x 18 feet with lavatory, toilet and locker room, and room for training table 12 x 26 feet. In a one-story ell adjoining the basement is the kitchen 32 x 34 feet, with pantry, ice room, coal room, toilet room and closet. From the basement up, the building is separated into three sections by two 12-foot brick fire walls, which extend up through the roof. Each section has its own entrance, vestibule hall, and corridor. The first story of the central section has a reception hall and living room, with bath, lavatory, and shower bath on one side of the corridor, and on the other side the Y. M. C. A. rooms with toilet, lavatory, and shower bath. The central section in the second, third, and fourth stories is divided in each story into four chambers, with shower bath and lavatories. The two end sections in each of the four stories are divided into four suites of two bedrooms and a study room, with a toilet, lavatories, and shower bath for the use of the four suites. The building will be covered with a tar and gravel roof. The interior will be of ash; the floor will be hard wood, with the exception of the kitchen, which will have a cement floor, and the toilets, which will have terrazzo floors. The walls will be decorated with paper. The building will be heated by steam and lighted by electricity. There are 96 rooms in the two end sections and 17 in the central section, making a total of 113 rooms above the basement. Each bedroom has an ample clothes closet.

The Poultry Plant.—The poultry plant of the College of Agriculture consists of an incubator cellar, 25 x 40 feet in size, built of brick with non-conducting walls. On top of this cellar has been erected a one and a half story frame structure in which are located a poultry apparatus laboratory, in which machinery of various kinds is operated, and storage rooms for feed, incubators, brooders, and other equipment. Attached to the incubator cellar is a brooder house, 15 x 40 feet, for winter instruction. It is equipped with a hot water heater. The fattening and killing house is 14 x 45 feet in size with interior arrangement to demonstrate crate and pen fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room and is equipped with water heater, cooling tanks, etc. The several breeds of fowls kept by the College of Agriculture for purposes of instruction are housed in colony houses of various styles and sizes, and one long laying house built on the most approved plans.

The poultry plant belonging to the Experiment Station contains an incubator house, 31 x 31 feet, with tenement above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2,500 chicks.

The Farm Buildings.—The lower barn, 100 x 50 feet, contains a modern tie-up with 26 stalls, two grain rooms, two bull rooms, nursery, calf room, and silo, and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, an electric motor for power, and a mill for grinding. The barns are lighted by electricity and supplied with water and steam. The basements of the barns contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, is of special design and contains six large pens, a nursery, and a storage room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery.

A modern up-to-date piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed-cooking rooms.

A ten-room farm cottage, occupied by the men employed in the different departments comprising the College of Agriculture, has also been erected.

The farm of the University of Maine is composed of two parcels of land aggregating 473 acres, of which 120 acres are under cultivation.

The cultivated land is handled according to a definite system of rotation of crops, including hoed crops, nurse crops, and hay crops. Such grains as oats, barley, rye, and wheat are grown extensively, and potatoes and corn form a large part of the crops of the farm. The hay acreage cuts considerably more than 100 tons annually. The fertility of the land is maintained by applications of lime, barnyard dressing, commercial fertilizers, and by turning under of green crops once in four years. It is the aim of the management to make the farm support the live stock maintained upon it. The areas of permanent pasture land form a considerable part of the farm and the remainder of it is given up to forest and orchard areas. Highmoor Farm, purchased by the State Legislature for use of the Experiment Station, is described under that department of the University.

The Mt. Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings upon a site overlooking the campus, and commands a beautiful view of the river, villages, and hills. It is two stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor, dining-room, kitchen, bath-room, and ten study rooms, intended for two students each. The rooms are large, well lighted, heated by steam, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. The Mt. Vernon House is under the supervision of a matron.

The Fraternity Houses.—Eleven of the student fraternities occupy club houses. Nine of the houses are on the campus, and two in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. The fraternities maintain their own boarding establishments.

The Infirmary.—A small wooden building has been erected on the back campus, to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for women, as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, the Commons, or general boarding house, and six residences occupied by members of the faculty.

The Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus, about 1,200 feet from the Gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and field athletics.

THE LIBRARY

The library contains over forty-three thousand bound volumes and over ten thousand pamphlets, and includes the library of the Experiment Station, which contains about two thousand five hundred volumes, and that of the College of Law, which contains about three thousand volumes. Reference libraries are maintained in departmental rooms by those departments which require them.

More than half the volumes in the library have been added within the last ten years. Accessions average about 2,500 annually, and the greater portion of these are acquired by purchase. For the most part purchases are made of books selected by heads of departments, and this method results in a collection of great working value.

The library is classified according to the Dewey system, slightly modified; there is a card catalog arranged by authors and subjects; access to the shelves is entirely unrestricted. Students may borrow three volumes at a time, to be retained three weeks, when they may be renewed, unless previously called for; special permission to borrow a larger number may be obtained, when necessary, upon application to the librarian. There is a fine of two cents a day for books kept over time. Officers and alumni of the University may borrow any reasonable number of volumes without time limit, except that all books must be returned at least nine days before Commencement, and the return of any volume may be required at any time by the library committee. Other responsible persons may obtain the privileges of the library upon application to the Librarian. The Librarian and his assistants are glad to give advice and help at any time.

THE MUSEUM OF NATURAL HISTORY

GILMAN ARTHUR DREW, Director
Curator of the Zoölogical Collections
LUCIUS HERBERT MERRILL
Curator of the Geological Collections
MINTIN ASBURY CHRYSLER
Curator of the Botanical Collections
CYRUS SKILLINGS WINCH
Taxidermist and Assistant Curator of the Zoölogical Collections

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building.

The taxidermist devotes his entire time to the museum. Contributors may be assured that their donations will be properly cared for. Valuable specimens that could be saved for the museum with little expense of time or money are frequently allowed to go to waste. While the museum is not in a position to pay for specimens, it will gladly arrange for their transportation, and the name of the donor will be placed on the specimen label. The locality and date of collection should accompany each specimen, as well as the name of the donor and such other information as might prove valuable.

Geological Collections.—These collections, occupying the upper floor of the wing of Coburn Hall, are accessible daily during the college year except on Saturdays and Sundays. They include the more important fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the state; a general collection of the more common minerals; a collection of economic minerals furnished by the U. S. National Museum; an educational series of rocks furnished by the U. S. Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the state may be made of great value, both from the scientific and economic standpoint. Students and others residing in the state are urged to contribute specimens from their home localities. During the year valuable accessions have been received from the United States National Museum.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formaline material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the state, a sm ll set of exotic mammals, a more complete working collection of native birds, birds' nests, and eggs, an illustrative collection of the other groups of vertebrates, a rather large collection of the shells of native and exotic molluscs and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

During the year the taxidermist, beside preparing many birds and small mammals for exhibition, has collected material for a number of groups and has mounted several of the animals so they may be exhibited individually until space for the cases necessary for groups can be provided.

The completed cases of deer, partridges, and guillemots continue to attract much attention.

Through the courtesy of the Fish and Game Commissioner and other friends of the museum, most of the material that is needed for an exhibition case of moose has been procured. A young bull, as nearly a spike-horn as possible, is still needed. Efforts are being made to get material for a group of caribou this year.

Others to whom the museum is indebted for valuable donations are Messrs. A. H. Sampson, H. R. Wing, E. R. Gross, C. Cavanaugh, George Wentworth, F. W. Edgecomb, J. M. Eaton, H. Jordan, O. W. Knight, Charles McKenney, H. R. Millet, and Burton Bartlett. Many members of the faculty, students, and other friends of the University have contributed one or more specimens each, and the taxidermist has collected many specimens.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall. The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents

more especially the flora of Maine and other New England States, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticæ, Cummings and Seymour's North American Lichens, and a collection of economic seeds prepared by the U. S. Department of Agriculture.

The collection of conifers mounted in jars has been largely augmented during the past year, partly from specimens secured near the University, and partly from material obtained by exchange from Oregon. The set of wood specimens representing Maine timber trees is still far from complete, owing to lack of case room. A small collection of living cacti has been received from New Mexico and placed in the Botanical greenhouse.

THE ART COLLECTION

The establishment of the Classical department in the University of Maine, in 1899, marked the beginning of an awakened interest in the College of Arts and Sciences. Parallel with the introduction of these studies has been the interest in an art collection which serves to vitalize and intensify the work in the humanities.

The collection which has gone forward with rapid growth consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University is fortunate in possessing many of the famous poly-

chrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library contains examples of the work of the chief Florentine and Umbrian masters of the 14th and 15th centuries, arranged on the walls in historical sequence. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the Classical departments have a large collection of photographs and lantern slides. A stereopticon lantern is a part of the regular equipment in Classics and Art.

ORGANIZATIONS

The following is a list of organizations existing in the University: The Deutscher Verein, the Cercle Français, the Debating Society, the Electrical and Mechanical Society, Alpha Zeta, (honorary), the Agricultural Club, the Civil Engineering Society, the Chemical Society, the Literati, the Dramatic Club, the Phi Kappa Phi (honorary), the Young Men's Christian Association, the Young Women's Christian Association, the Round Table, the Arts Club, the Athletic Association, the Glee Club, the Instrumental Club, the Band.

Junior Electrical and Mechanical Society.—The Junior Electrical and Mechanical Society aims to unite the interests of the electrical and mechanical students and to keep its members in touch with the practical side of engineering. The society meets each week when topics of practical interest are explained and discussed. All juniors in electrical or mechanical engineering are eligible to membership, and seniors are honorary members.

Student Section of the American Society of Mechanical Engineers.—A regularly organized section of the above named national society holds regular meetings for the presentation and discussion of engineering papers by members and by visiting engineers.

Junior Civil Society.—This society is composed of the members of the junior class who take the course in civil engineering. The object of the society is to investigate by reading and discussion the various

engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of other institutions and by other practicing engineers.

The affairs of the society are controlled by the students under the advice of the head of the department of civil engineering.

ALPHA ZETA.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing, or to those who have shown marked ability along the lines of agricultural study and research.

THE AGRICULTURAL CLUB.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

THE DRAMATIC CLUB.—The Dramatic Club aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all undergraduates are eligible.

THE LITERATI.—This is an organization in the College of Arts and Sciences for the promotion of the literary, dramatic, and musical interests of the University.

DEUTSCHER VEREIN.—This society, organized in 1902, is composed of students and teachers. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

CERCLE FRANÇAIS.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the fall semester of the senior year the five members of the class having the highest standing are elected members, and at the end of the year the five next highest in the collegiate department, and two from the College of Law, are added.

The Young Men's Christian Association.—The Young Men's Christian Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Library, and classes for the study of the Bible are conducted on Sunday. This association is a branch of the national Young Men's Christian Association.

The Young Women's Christian Association.—This is an organization for religious work composed of women students.

Round Table.—The Round Table is an organization of the women of the faculty and the wives of the professors and instructors in the University. Its purpose is to promote the social welfare of the students.

The Arts Club.—This is a club composed of the professors and instructors in the College of Arts and Sciences with their wives. It meets fortnightly and discusses various subjects of general interest.

UNIVERSITY PUBLICATIONS

The Annual Catalog of the University of Maine.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

The Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the trustees and president includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalog of graduates.

The University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

The Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general

public. Among recent issues are bulletins relating to the Classical Curriculum, the Curricula in Agriculture, the Curriculum in Pharmacy, the College of Law, the College of Arts and Sciences, the College of Technology, the Curriculum in Forestry, the Courses in Education, the Summer Term, and Student Expenses.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the state by the Department of Agricultural Extension.

The Annual Report of the Experiment Station, and the Experiment Station Bulletins.—These give complete results of the work of investigation of the Station.

Official Inspections.—These are published by the Maine Experiment Station, and contain the results of the work in commercial feeding stuffs, commercial fertilizers, agricultural seeds, and foods and drugs.

The bulletins and "Official Inspections" are sent free on request to any resident of Maine.

The Maine Campus.—This is a journal published weekly during the academic year by an association of the students.

The Prism.—The Prism is an illustrated annual, published by the junior class.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammunition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of four companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the new olive-drab service uniforms pre-

scribed for infantry officers of the United States Army, except that "Maine" insignia and buttons are used; for non-commissioned officers, the new olive-drab service uniforms of the United States Army, except that "Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14.15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty, and may wear it at other times.

The three seniors who attain the highest standing in the military department are reported to the military secretary of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

With the exceptions noted below, all men students physically qualified are required to take military work for three hours a week during their first and second years at the University. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years' course. After the freshmen and sophomore years the work is elective. Students in the College of Law, the School Courses in Agriculture, the Short Curriculum in Pharmacy, and graduate students, are excused from military work. Students admitted to advanced standing may elect other work equal in credit.

The grades and relative rank of officers and non-commissioned officers will be determined by the Professor in charge, subject to the approval of the President.

PHYSICAL TRAINING

Physical training is required of freshmen two hours per week. Credit is given on the basis of three hours of physical training to one hour of recitation. All other students may elect this work and receive credit. Students registered on athletic teams are excused from this prescribed physical training during the time they are engaged in the regular athletic training, but no credit will be given for the athletic training unless the physical training is taken for the remainder of the year. Every student registering for an athletic team must pass the required physical examination.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the physical director,

the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. There is a floor space of 6,262 square feet and an overhead running track. This is supplied with an equipment of modern apparatus for heavy and light gymnastic work.

The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220 yard straightaway and is graded and laid out for football, baseball, and track athletics. Here the men may exercise for recreation or train for active competition. There are several tennis courts on the university campus. On the Stillwater river canoeing may be enjoyed, as well as skating and ice hockey in the winter.

All male students exercising at class hours wear the regulation suit which consists of white shirt, white running pants with blue stripe, and white rubber sole shoes.

It is the aim of the department of physical training to encourage participation in all forms of wholesome out-door exercise and to arouse a general interest in athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for an athletic team, the department of physical training maintaining a reasonable supervision to insure regularity.

PUBLIC WORSHIP

Short religious services are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Asociation and the Young Women's Christian Association, are held twice each week. Vesper services are held during the year in the University chapel Sundays at 3 P. M. At these services representatives of the various religious denominations are present and address the students.

GENERAL REGULATIONS

It is assumed that all students entering the University are willing to be guided by the following:

RULE OF CONDUCT

A student is expected to show both within and without the University respect for order, morality, and the rights of others; and such sense of personal honor as is demanded of good citizens and gentlemen.

The regulations in regard to the selection of studies, standing and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, and athletics, and student organizations, are printed in a pamphlet, which may be obtained from the Secretary.

By these regulations, the quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of twenty-two hours of class-room work each week. In the application of this rule, two or three hours of laboratory work, or of other exercises not requiring preparation, count as one hour. No excuses for absence are asked for or required. Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise. Any student whose absence from any class-room subject exceeds certain stated limits, in general ten per cent. of that subject, is dropped from that class and may be reinstated only by favorable action of the instructor and of the Committee on Attendance. If after reinstatement his record be unsatisfactory either to the instructor or to the committee, he is permanently dropped from that class.

Written examinations are held immediately before the beginning of the fall semester for all studies in arrears. A student absent from the University by permission of the Faculty, at the time of these arrearage examinations, may have a special examination at such time as may be arranged with the instructor under whom the arrearage occurred. For such a special examination a fee of two dollars shall be paid to the University. A student who fails to make up an arrearage in a required subject before the study is again given in class is required to attend recitations in that study, or make up the work under a tutor selected by the Faculty.

Each student is given a report of his work shortly after the close of each semester. Parents or guardians may obtain these reports upon application to the Secretary.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average grade of B, after the freshman year. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in

each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average grade of B in all previous work, and an average standing of ninety per cent. in all previous work of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester. Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the Faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory or drawing-room work may be tested by examination, or thesis, or both, at the discretion of the committee. The note-books kept in such work shall be submitted to the committee and may take the place of a thesis in case they show practically the whole work of the course. The Faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees

The degree of Bachelor of Arts (B. A.) is conferred upon all students in the College of Arts and Sciences. These students are required to fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science (B. S.) is conferred upon students who complete the Chemical, Agricultural, Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Forestry, Pharmacy, or Domestic Science courses.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the Short Pharmacy Course.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the Law Course.

A member of the Senior class who at the end of the spring recess is deficient in any subject in which no regular examination is to be held during the remainder of the year, may have one examination, not later than the last Friday of the year, at such time and in such manner as the instructor having charge of that study may determine. Except under extraordinary circumstances, no special examination will be allowed to a senior who fails in, or is excluded from, a final examination at the end of the spring semester.

Theses required from candidates for the degree of B. S. must be completed to the satisfaction of the major instructor and deposited in the library, accompanied by the binding fee, not later than twelve o'clock (noon), nine days preceding Commencement. They shall be printed or typewritten, unless the subject matter prevents, on paper of good quality, 8 x 10½ inches, with not less than one inch margin on the inner edge and half-inch margin on the outer. They shall be bound in black leather with title on first cover. Drawings accompanying a thesis may be folded and bound with the thesis, or placed in a pocket on the third page of the cover; or, if too many for this, they may be bound separately, in size to suit the drawings.

Candidates for degrees who fail to meet these requirements will not be awarded their degrees, and their names will not appear on the Commencement program. A minimum residence of one year is required for the attainment of any bachelor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each college year, not later than Oct. 1. Those entering the University after that date must obtain the consent of the committee on advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts or Master of Science must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and master's degrees.

No work done before the conferring of the bachelor's degree shall be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study for each candidate must be approved by the committee on advanced degrees not later than the first week in October. A registration fee of $5 is charged, and an additional fee of $15 for examinations and diplomas is payable upon the completion of the work. One registration fee is required for graduate students.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the fifteen hours required in the spring semester. Theses must be submitted not later than May 20th. The same regulations regarding the size and style of binding, outlined under the Bachelor's degree, apply here.

For the conditions for the degree of Master of Laws see the statements under the College of Law.

The professional degrees of Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), may be conferred upon graduates of the Civil Engineering, Mechanical Engineering, and Electrical Engineering curricula, respectively, upon the presentation of a satisfactory thesis after at least three years of professional work subsequent to graduation. A fee of $10.00 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

An estimate of the necessary annual expenses of a student in any department, except the College of Law, is made in the following table. For the expenses of students in the College of Law, see the article on that College. It should be noticed that clothing, traveling, vacation, society, and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in Oak Hall and board at the Commons. The

necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses.

Annual Expenses for Students from Maine

Tuition, registration fee, and incidentals for the year..	$60 00
Laboratory fees, (average) about.....	10 00
Text-books, about	15 00
Board, 36 weeks at $3.50.....	126 00
Heat and light for half room, and general care of dormitory	30 60
Total	$241 60

The tuition charge is $30.00 a semester, or $60.00 a year for students from Maine. For students from outside the state the tuition is $35.00 a semester, or $70.00 a year. Tuition includes what has heretofore been subdivided into tuition, incidentals, and registration fees.

By act of the Legislature, $30.00 per year is deducted from the above charge for students in the curricula in Agriculture, this being the amount of tuition charged at the time of the ACT. This does not apply to students in Forestry or Domestic Science.

By act of the Legislature of 1909, the charge to engineering students from outside the state of Maine, for the next four years, is to be $100 per year instead of $70. The charge for students from outside the state of Maine in all other courses remains the same as heretofore, $70 per year.

The registration fee of $5.00, which is included in the tuition charge, must be paid at the beginning of each semester before the student enters any classes.

A fee of $2.00 is charged for any special examination.

The incidental fee is $10.00 a semester, or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

A student obliged to leave the University within two weeks after the beginning of the semester may have the foregoing amounts refunded with the exception of the registration fee. A student leaving within the first half of the semester receives a rebate of one-half the incidental expenses, and one-half of the tuition. No other rebate is made.

The cost of text-books will average about $15.00 a year for the course. These may be bought at the college store. The expense may be decreased by buying second-hand books.

Students in the laboratories and shops pay certain charges to cover the cost of materials and maintenance. These charges are as follows: chemistry, per course, $2.00-$5.00; bacteriology, per course, $3.00; physics, per course, $2.50 to $3.50; pharmacy, per semester, about $3.50; mineralogy, $2.00; biology, per course, $2.00 to $3.00; civil engineering, $2.00 to $5.00; electrical engineering, per course, $2.50; mechanical engineering, per course, $2.00; shop work, per course, $4.00 to $5.00.

The largest item of expense is board. At the Commons, the university boarding house, the price is $2.75 a week exclusive of meat, fish and eggs. The average cost is about $3.50 per week. Board may be obtained in clubs or private families at prices ranging from $3.50 to $4.50 a week.

The charge for rooms in Oak Hall is eighty-five cents a week for each student, when two occupy a room. This pays for heat and light, and for the lighting and care of the halls, public rooms, and dormitory.

Students in Oak Hall supply their own furniture with the exception of a cot bed. Applicants for rooms in Oak Hall or Mt. Vernon House should make early application to the Secretary, as the accommodations are limited. Students are required to furnish three sheets and two pillow cases in addition to the other bedding. All students, except incoming freshmen, who reserve rooms in Oak Hall will be required to make a deposit of $5.00 before August first.

The University does not assume responsibility for furniture left by students in their rooms. Such furniture is left at the student's risk.

Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 to $3.00 a week if occupied by two persons.

Expenses in connection with athletics are met by voluntary subscriptions. They amount to $10.00 a year.

Women students who do not live at their own homes are required to room and board at the Mt. Vernon House. All the rooms in this house are supplied with the larger articles of furniture. Six of the ten rooms are corner rooms. For rooms of the first grade, with board, heat, and light, the charge is $85.00 a semester for two in a room. For the second grade rooms the charge is $81.00. No discount is made for absence except for prolonged illness.

A four story building in the village of Orono, known as the University Inn, provides board and rooms for a number of students.

Each student is required to deposit with the treasurer a bond, with two names as sureties, in the amount of $150.00 to cover bills. Blank forms for bonds will be furnished by the Secretary upon application. Those who keep a sufficient deposit with the Treasurer to cover the bills of one semester will not be required to furnish a bond. The deposit required from Maine students is $95.00 for those who board at the Commons or Mt. Vernon House, and $35.00 for those who do not. For students outside of Maine these amounts are $100.00 and $40.00. For engineering students from outside of Maine the amount is $115.00. This deposit is in addition to the registration fee, and must be paid at the beginning of each semester. *No student will be allowed to graduate who is in debt to the treasury.*

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self-help may be obtained upon application.

LOANS

Tuition Loans

Residents of Maine who need assistance and maintain a satisfactory record may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the College of Law.

Borrowers are required to give notes with satisfactory endorsement. The loans bear interest at six per cent. per annum, and are due at the rate of $30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the Faculty is accepted as an endorser.

Loans are granted by a committee consisting of the President and two other members of the Faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in the preceding June. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall semester. Applications should be made not later than October 10. They must be made to the President upon blanks to be obtained from the Secretary of the Faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans, by October 10.

The Kittredge Loan Fund

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security, but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship, thirty dollars, was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University, of the class of 1879, and is awarded to a member of the junior class to be selected by the President and the Faculty.

The Western Alumni Association Scholarship, tuition for the sophomore year, is awarded that that student taking a regular course, whose deportment is satisfactory, and who makes the best progress in all studies during his freshman year.

The Junior Exhibition Prize, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

The Sophomore Declamation Prize, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

The Walter Balentine Prize, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., a graduate of the University of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

The Kennebec County Prize, twenty-five dollars, the gift of Hon. William T. Haines, Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best essay on applied electricity.

The Franklin Danforth Prize, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the agricultural course who attains the highest standing.

The Pharmacy Prize, five dollars, is awarded to that student in the pharmacy department who attains the highest standing in chemistry in the last year of his course.

The Holt Prizes, the gift of Erastus Eugene Holt, A. M., M. D., LL. D., of Portland, is given to the three students of the senior class who show the greatest improvement in their rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body, devised by Dr. Holt.

The New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. In 1907-8 it was awarded to the student who excelled in debate.

The Pittsburg Alumni Association Scholarship, yielding tuition for one year, is awarded to a member of the junior class in the College of Engineering, to be selected by the President and Professors in that College.

Mr. L. C. Bateman, of the *Lewiston Journal,* offers a prize of ten dollars for the best essay on Dairy Bacteriology, by any student in any agricultural course.

Hon. E. B. Winslow, of Portland, offers a cash prize of ten dollars to be awarded for the highest scoring butter, made and exhibited by any person who has taken the dairy course at the University of Maine. The butter is to be shown at the annual meeting of the Maine Dairy Association.

The American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the Faculty, to the member of the senior class in Pharmacy who has the best record in his college course.

The Gilbert M. Gowell Scholarships, two scholarships of thirty dollars each, given by a member of the class of 1908, to be awarded to two students in the four years Agricultural courses under the following conditions: These scholarships are to be awarded to students who have completed the first or second year's work in the College of Agriculture. One half of each prize is to be placed to the credit of the student on his term bill at the beginning of each semester of the following year. They are to be awarded to students who are in need of financial assistance, who are making the most satisfactory college record, and who have not been registered in any other course in the University. The selection of the students is to be made by the President and the Faculty of the College of Agriculture.

ADMISSION

General Requirements.—Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one semester will be accepted in place of a bond. In the College of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of B must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Graduates of a college of equivalent standing who wish to enter a technical course are admitted to the junior class without examination, provided their course has covered a sufficient amount of work in mathematics, physics, and chemistry.

Special Recommendations.—A good preparation in algebra and geometry is most important for those who expect to enter engineering courses. The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing for the classical courses should devote especial attention to Greek and Latin composition, Roman history, and Latin pronunciation according to the Roman method.

Special Students.—Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, rather than for those who are incompetent to pursue a regular course. Candidates under twenty-one years of age will not be received as special students, unless they have completed the regular requirements for admission.

No examinations are required for admission to the special and extension courses in agriculture.

The terms of admission to the College of Law are stated under the proper heading.

Admission by Examinations

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person, who will consent to conduct examinations on the days appointed in June. If possible these examinations should be in charge of the principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately, accompanied by the endorsement of the examiner. The examinations must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Secretary of the Faculty. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their Principals regarding their fitness to take the examinations, and to undertake college work. The examinations given by the College Entrance Examination Board will be accepted by the University. A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission by Certificate

Certificates for admission to the freshman class without examination are accepted only from graduates of schools approved by the New England College Entrance Certificate Board (except in the case of schools outside of New England). A list of approved schools will be sent upon application. They will not be accepted for non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the Principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

Certificates from schools approved by the New England College Entrance Certificate Board will be accepted at any of the institutions co-operating to maintain it. Any Superintendent or Principal desiring to have a school under his charge placed upon the approved list should apply before April 1st to the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown St., Providence, R. I.

ENTRANCE REQUIREMENTS

The requirements for admission are those adopted by the Maine Association of Colleges and Preparatory Schools.

To gain admission to any of the courses leading to the degrees of B. A. or B. S., 28 points must be offered by the candidates, according to the following schedules (to count 2 points, a subject must be pursued for one school year, with five recitation periods, of at least 45 minutes each, a week):

For the B. A. Courses

Required Subjects

Foreign languages	8 points
English	6 points
History	2 points
Mathematics	5 points

Optional Subjects (7 Points to be Chosen)

(Not less than four points of any one foreign language will be accepted, except under special conditions.)

Each year of Greek	counts	2 points
" " Latin	"	2 "
" " French	"	2 "
" " German	"	2 "
Chemistry (including note-book)	"	2 "
Physics (including note-book)	"	2 "
Biology (including note-book)	"	2 "
Solid Geometry	"	1 point
Roman History	"	1 "
Greek History	"	1 "
English History	"	1 "
American History and Civil Government	"	1 "

The requirement in History must include either a year of Greek or Roman History, a year of English or American History, or a year of American History and Civil Government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

For the B. S. Courses

(Engineering, Agriculture, Chemistry, Forestry, Pharmacy, and Domestic Science.)

Required Subjects

College Entrance English	counts	6 points
Algebra	"	4 "
Plane Geometry	"	2 "
Solid Geometry (College of Technology)	"	1 point

Optional Subjects (16 or 17 Points to be Chosen)

(Of these, two years of one modern language, one year of science, and one year of history must be taken. Candidates entering a B. S. course and offering four years of Latin may complete their entrance credits without a modern language, but must take at least four credits in mondern language in college.)

Each year of French	counts	2 points
" " German	"	2 "
" " Latin	"	2 "
" " Greek	"	2 "
Advanced Mathematics (Algebra and Trigonometry)	"	2 "
* Mechanical Drawing (for technical courses)	"	1 point
* Manual Training (for technical courses)	"	1 "
Chemistry (including note-book)	"	2 points
Physics (incuding note-book)	"	2 "
Physiography (one-half year or one year)	counts	1 point or 2 "
Biology (including note-book)	counts	2 "
Botany (including note-book)	"	2 "
Zoölogy (including note-book)	"	2 "
Physiology	"	1 point
Roman History	"	1 "
Greek History	"	1 "
English History	"	1 "
American History and Civil Government	"	1 "

Candidates for admission to the B. S. courses who are well prepared in all the required subjects, but whose high-school course has included other subjects, instead of some of the electives mentioned above, will be allowed to substitute any subjects that will furnish a real equivalent. Each case of such proposed substitution will be considered upon its merits.

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* Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing on the basis of one credit for five forty-five minute periods per week for one year in one subject taken in the high school.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on Descriptive Geography, Arithmetic, English Grammar, Physiology, United States History, and Algebra through simple equations of the first degree. Graduates of high schools will be admitted upon recommendation of the Principal.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject.

Languages

ENGLISH.—The entrance examination in English presupposes courses in Composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in Composition particularly is of slow growth, and requires almost daily cultivation during a long period of time. Books, to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course such work in the elements of Rhetoric, for example, as is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination on the B list of books will include incidentally questions on the syntax of sentences, and on general grammatical principles.

The grammatical sense is slowly acquired. Grammar, therefore, should be studied in the early grades and kept up from year to year and not formally introduced in some one grade, as the seventh or eighth.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Prospective candidates are advised to give especial attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The

candidate is not expected to have a detailed knowledge of these books; but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1910, 1911, and 1912, the books are as follows: A. Group I (two to be selected): Shakespeare's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night. Group II (one to be selected): Bacon's Essays; Bunyan's Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography. Group III (one to be selected): Chaucer's Prologue; Spenser's Faerie Queen, (selections); Pope's The Rape of the Lock; Goldsmith's The Deserted Village: Palgrave's Golden Treasury, (First Series) Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns. Group IV (two to be selected): Goldsmith's Vicar of Wakefield; Scott's Ivanhoe, Quentin Durward; Hawthorne's House of the Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens's Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna Doone. Group V (two to be selected): Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc, The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (selected); Ruskin's Sesame and Lilies. Group VI (two to be selected): Coleridge's Ancient Mariner; Scott's Lady of the Lake; Byron's Mazeppa, The Prisoner of Chillon; Palgrave's Golden Treasury, (First Series) Book V, with special attention to Wordsworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's Courtship of Miles Standish; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, and Pheidippides.

The B list of books is for thorough *study*. The examination will be upon subject matter, form, and structure.

B. Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address, and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

French.—The admission requirements in elementary and advanced French are those recommended by the Modern Language Association of America.

I. Elementary French

At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life, or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; order of words in the sentence, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographic sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, prenominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *le Roi des montagnes;* Bruno, *le Tour de la France;* Daudet, Easier Short Tales; De la Bédollière, *La Mère Michel et son chat;* Erckmann-Chatrian's Stories; Foa, *Contes biographiques* and *le Petit Robinson de Paris;* Foncin, *le Pays de France;* Labiche and Martin, *la Poudre aux yeux* and *le Voyage de M. Perrichon;* Legouvé and Labiche, *la Cigale chez les fourmis;* Malot, *Sans famille;* Mairet, *la Tâche du petit Pierre;* Mérimee, *Colomba;* Extracts from Michelet; Sarcey, *le Siège de Paris;* Verne's Stories.

II. Advanced French

At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrase's, abstracts or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's Stories; Augier and Sandeau, *le Gendre de M. Poirier;* Béranger's Poems; Corneille, *le Cid* and *Horace;* Coppée's *Poems;* Daudet, *la Belle-Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's Letters; Hugo, *Hernani* and *la Chute;* Labiche's Plays; Loti, *Pêcheur d'Islande;* Mignet's Historical Writings; Molière, *l'Avare* and *le Bourgeois gentilhomme;* Racine, *Athalie, Andromaque,* and *Esther;* George Sand's Plays and Stories; Candeau, *Mademoiselle de la Seiglière;* Scribe's Plays; Thierry, *Récits;* Vigny, *la Canne de jonc;* Voltaire's Historical Writings.

At the end of the fourth year the pupil should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: Beaumarchais' *Barbier de Séville;* Corneille's dramas; the elder Dumas' Prose Writings; the younger Dumas *la Question d'argent:* Hugo *Ruy Blas,* Lyrics, and Prose Writings; La Fontaine's Fables; Lamartine *Graziella;* Marivaux's Plays; Molière's Plays; Musset's Plays and Poems; Pellissier *Mouvement littéraire au XIX siècle;* Renan *Souvenirs d'enfance et de jeunesse;* Rousseau's Writings; Sainte-Beuve's Essays; Taine *Origines de la France contemporaine;* Voltaire's Writings; Selections from Zola, Maupassant, and Balzac.

The examinations of the College Entrance Certificate Board in Ele-

mentary French will be accepted for four points, and that in advanced French for two additional points.

GERMAN.—The admission requirements in elementary and advanced German are those recommended by the Modern Languages Association of America.

I. Elementary German

The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil, first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schwiegersohn;* Gerstäcker, *Germelshausen;* Heyse, *L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *Die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Seidel, *Märchen;* Stökl, *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;* Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should pre-

dominate. A good selection of reading matter for the second year would be Andersen, *Märchen,* or *Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Vergangenheit,* for example, *Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué, *Undine;* Gerstäcker, *Irrfahrten;* Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnhelm;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen,* for example, *Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterseher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for four points, and that in advanced German for two additional points.

Latin.—The entrance examination in Latin will consist of four parts as follows:

1. An examination on the elements of Latin grammar and easy translations.

2. a. An examination in sight translation of Latin prose suited to test the ability of a candidate who has read from Cæsar (Gallic War and Civil War) and Nepos (Lives) an amount not less than Cæsar, Gallic War, I-IV.

b. Questions on the ordinary forms and constructions of Latin grammar and the translation of easy English sentences into Latin.

3. a. An examination on Cicero, speeches for the Manilian Law and for Archias, with questions on subject-matter, literary and historical allusions, and grammar.

b. An examination in sight translation of Latin prose adapted to candidates who have read from Cicero (speeches, letters, and De Senectute) and Sallust (Catiline and Jugurthine War) an amount not less than Cicero, speeches against Catiline I-IV, for the Manilian Law, and for Archias.

c. A test in writing simple Latin prose which shall demand a thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school.

4. a. An examination on Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody.

b. An examination in sight translation of Latin poetry adapted to candidates who have read from Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia) an amount not less than Vergil, Æneid, I-VI.

A candidate may obtain separate credit for each part. Each represents a year's work and entrance credit for two points.

In parts 2 and 3 candidates must deal satisfactorily with both the sight and set passages, or they will not be given credit for either.

Greek.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescribed.

History

Greek History.—History of Greece, to the capture of Corinth, 146 B. C. Myers, Morey, or Botsford.

Roman History.—A knowledge of Roman history, down to the death

of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

English History.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

United States History and Civil Government.—A knowledge such as may be obtained from Fiske, Hart, Montgomery, or McLaughlin's History of the United States.

Mathematics

Algebra.—The four fundamental operations for rational algebraic expressions. Factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, including complex fractions, and ratio and proportion. Linear equations, both numerical and literal, containing one or more unknown quantities. Problems depending on linear equations. Radicals, including the extraction of the square root of polynomials and of numbers. Exponents, including the fractional and negative.

Quadratic equations, both numerical and literal. Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations. Problems depending on quadratic equations. The binomial theorem for positive integral exponents. The formulas for the nth term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Plane Geometry.—The usual theorems and constructions of good text books, including the general properties of plane rectilinear figures; the circle and the measurements of angles; similar polygons; areas; regular polygons and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions of good text books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles. Proofs of principal

formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas. Solution of trigonometric equations of a simple character. Theory and use of logarithms (without the introduction of work involving infinite series). The solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

Advanced Algebra.—Permutations and combinations, limited to simple cases. Complex numbers, with graphical representation of sums and differences. Determinants, chiefly of the second, third and fourth orders, including the use of minors and the solution of linear equations. Numerical equations of higher degree, and so much of the theory of equations with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

Sciences

* Chemistry.—The necessary ground is covered by the following textbooks: Brownlee and others, Hessler and Smith, McPherson and Henderson, and Newell.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoölogy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy; but in such cases it must be treated as an integral part of the subject under consideration.

REQUIREMENTS FOR GRADUATION

The college year is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for a semester in the College of Arts and Sciences is fourteen hours a week

(exclusive of physical training and military science), leading to two and four-fifths credits. In the other Colleges the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work, and other subjects not requiring preparation, count as half time, unless otherwise specified. Such subjects are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

Except in the College of Law, the Short Pharmacy Course, and the School Course in Agriculture, candidates for graduation are required to complete a four years' curriculum of study by securing twenty-five or thirty credits, according to the college in which they are registered.

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* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certificated in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

ORGANIZATION OF THE UNIVERSITY

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together for a unit. The organization is as follows:

College of Arts and Sciences
- The Bachelor of Arts Curricula
- The Summer Term

College of Agriculture
- The Agricultural Curricula
- The Forestry Curriculum
- The Domestic Science Curricula
- The Extension Courses
- The School Courses in Agriculture

College of Technology
- The Chemical Curriculum
- The Chemical Engineering Curriculum
- The Civil Engineering Curriculum
- The Mechanical Engineering Curriculum
- The Electrical Engineering Curriculum

College of Pharmacy
- The Pharmacy Curriculum
- The Short Curriculum in Pharmacy

College of Law

Agricultural Experiment Station

GENERAL STATEMENT

The College of Arts and Sciences, the College of Agriculture, the College of Technology, and the College of Pharmacy offer four years' courses leading to the bachelor's degree. The College of Law offers a three years' course leading to the bachelor's degree.

The College of Arts and Sciences has the following graduation requirements: (One year's work in college is equivalent to two years' work in preparatory school.)

1. English, one year, five hours a week, or the equivalent divided between two years, taken in college.
2. French and German, one year each, five hours a week, taken in college or preparatory school.
3. Science (chemistry, physics, or biology), one year, five hours a week, taken in college or preparatory school.
4. Courses in the classical departments, one year, five hours a week, taken in college.
5. Military Science and Tactics, two years, three hours a week.
6. Physical Training, one year, two hours a week.

The following courses may be elected to fulfill the conditions under No. 4:

Greek 11-19, inclusive; Latin 1, Latin 2, Latin 25; Philosophy 6.

The College of Agriculture, the College of Technology, and the College of Pharmacy have the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two years.
2. Mathematics, one year, five hours a week.
3. Science (chemistry, physics, or biology), one year, five hours a week, of which time an important part must be occupied with laboratory work.
4. Language (Greek, Latin, German, or French), the equivalent of one year, five hours a week. The requirement for Latin is fulfilled by completing Latin 1 and Latin 2; and for Greek by completing Greek 1 and Greek 2. A student beginning German or French must receive at least two credits in the subject to count it toward a degree.
5. Military Science and Tactics, two years, three hours a week.
6. Physical Training, one year, two hours a week.
7. The special requirements in each curriculum are found under the separate colleges.

The science requirement in each college demands a year's work in some one science, and is not fulfilled by fractions of a year's work in two or more sciences. In making up the language requirement, work done in preparation for college may be counted, but two years' preparatory study will be reckoned as one year of college work.

Twenty-five credits (one credit is given for a recitation course that meets five hours a week, or for a laboratory course that meets at least

ten hours a week, for one half year) are required for graduation in the College of Arts and Sciences; thirty credits are required for graduation in the College of Technology, the College of Agriculture, and the College of Pharmacy.

The requirements for admission to the College of Law are stated in connection with the description of that college.

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

ROBERT JUDSON ALEY, PH. D., LL. D.
President of the University

JAMES NORRIS HART, C. E., M. S., Sc. D.
Dean of the University, Professor of Mathematics and Astronomy

JAMES STACY STEVENS, M. S., LL. D.
Dean and Professor of Physics

MERRITT CALDWELL FERNALD, PH. D., LL. D.
Emeritus Professor of Philosophy

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological Chemistry

JOHN HOMER HUDDILSTON, PH. D. *Professor of Greek*

GILMAN ARTHUR DREW, PH. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages

GEORGE DAVIS CHASE, PH. D. *Professor of Latin*

CAROLINE COLVIN, PH. D. *Professor of History*

CHARLES DAVIDSON, PH. D. *Professor of Education*

ROBERT JAMES SPRAGUE, PH. D.
Professor of Economics and Sociology

WALLACE CRAIG, PH. D. *Professor of Philosophy*

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*

GUY ANDREW THOMPSON, M. A. *Professor of English Literature*

WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

EDGAR RAMEY WINGARD, M. S.
Director of Physical Culture and Athletics
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Botany*
RAYMOND GARFIELD GETTELL, M. A.
Professor of History (Summer Term)
LEON EDWIN BELL, M. A., S. T. B.
Professor of Education (Summer Term)
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
LEON ELMER WOODMAN, PH. D. *Assistant Professor of Physics*
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
WALTER EVERETT PRINCE, M. A. *Instructor in English*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
ROBERT RUTHERFORD DRUMMOND, PH. D.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMOND WILBUR, B. S. *Instructor in Mathematics*
EUGENE LOUIS RAICHE, *Instructor in French (Summer Term)*
HELENE JULIE RAICHE *Instructor in French (Summer Term)*
ALICE MIDDLETON BORING, PH. D. *Instructor in Zoölogy*
ERNEST CLAUDE DREW, B. S. *Instructor in Physics*
VICTOR ALVIN KETCHAM, A. B., LL. B. *Instructor in English*
HAROLD MERTON ROYAL, B. S. *Instructor in Physics*
LLOYD MEEKS BURGHART, B. A. *Instructor in Chemistry*
ARTHUR MOSES BUSWELL, B. A.
Instructor in Industrial Chemistry

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* Absent on leave.

GENERAL INFORMATION

The College of Arts and Sciences comprises:
The Bachelor of Arts Courses
The Summer Term

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

1. Men and women who desire to pursue a cultural college course.
2. Men and women who desire to enter professional schools which require a collegiate degree. The B. A. degree of the University of Maine is accepted as of the first rank at the graduate departments of the best universities.
3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 52-64. They are practically the same as for other New England colleges and may be met by a four years' preparatory course in a good high school or academy.

FRESHMAN STUDIES

The work of the first year is conditioned somewhat upon the subjects offered for admission.

It is recommended that all students in this college register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR INSTRUCTORS

Each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work: biology (including zoölogy, botany, physiology, and entomology), chemistry, economics, education, English, German, Greek, history, Latin, mathematics and astronomy, philosophy, physics, Romance languages (including French, Spanish, and Italian).

In many cases the selection of a major subject need not be made before the beginning of the sophomore year. A student may change his

major subject with the consent of the professors in charge of the department which he leaves and the one which he wishes to enter; but no student will be graduated who has not finished all the work required for graduation in some one department, no matter how much work he may have done in other departments. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this amount must be made up from such other related departments as the professor under whose direction the major subject is taken may prescribe. The remainder of the student's work may be selected from any department or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject, and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his major instructor, and during the remainder of the course this instructor acts as chief adviser in all matters relating to the course, and is a representative of the student before the faculty.

THE BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The curriculum demands a 25 credits course and is regularly completed in four years; but a student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years on their college course.

No outline of the curricula in the College of Arts and Sciences is given in the catalog, but students may have such an outline presented to them by applying to the professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology. The following subjects are suggested for a year's work in preparation for admission to certain medical colleges which require it: Biology 1; Chemistry 1, 2, 3, 4; English 4; Physics 4, 5; French or German 3a, 3b; Military Science 1.

GRADUATE CURRICULA

The candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and master's degree.

No work done before the conferring of the bachelor's degree can be counted towards the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study shall be submitted to and approved by the committee on graduate degrees.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the required fifteen hours.

THE SUMMER TERM

The summer term of the University of Maine is not a summer school, but so far as practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the college entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. College students who may wish to anticipate work in their course, or who may have work in arrears. A student should be able to make one credit (the equivalent of a five hours' subject for eighteen weeks) during the summer term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the university books.

Courses of Study

During the summer of 1910 courses were offered in the following subjects: Agriculture, Botany, Chemistry, Domestic Science, Education, English, French, German, History, Horticulture, Latin, Mathematics, and Physics. These courses are described in connection with the courses offered at the University during the remainder of the year.

Lectures 1910

Professor G. D. Chase,	The Basis of Humor
Professor R. G. Gettell,	The Development of the State
M. and Mme. Raiche,	Reading of L'Avare
Professor R. P. Gray,	Poetry and the Spirit of Man
Professor L. E. Woodman,	An Experimental Lecture in Physics
Professor G. W. Thompson,	An Organ Recital

Vesper Services

A brief religious service is conducted each Sunday afternoon at 4.00 P. M. in the Library. This consists of a song service and a brief address.

Library

Throughout the summer term the university library of 43,000 volumes and the reading room, containing about three hundred periodicals and the Maine daily papers, is open from 9.00 A. M. to 12 M., and from 2.00 to 5.00 P. M. daily, except Saturday afternoon and Sunday.

The library privileges ordinarily accorded to university students, including the home use of books, are extended to students in the summer courses.

Laboratories, Museums, and Observatory

The laboratories belonging to the departments of physics, chemistry, and botany are available for use of the students. In the physical and chemical laboratories there is ample provision for carrying on the various courses from the preparatory work to that of the graduate student in the University.

The botanical laboratory is in charge of the professor of biology. The student is furnished with microscope, specimens, and preparations for advanced work.

The fees for these courses may be found on page 48.

The museum is illustrative of the rocks and fauna of Maine, and is open at stated periods for the use of the students.

The observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The work of the observatory is explained by Professor Hart in evening lectures.

Teachers' Agency

The authorities of the Summer Term have made arrangements with a Teachers' Agency whereby the students in attendance may secure the benefits of the agency without paying the usual registration fee. Frequent calls are received each year for teachers, the demand greatly exceeding the supply. Every effort will be made to secure satisfactory positions for properly qualified teachers.

Expenses

Tuition for the term of six weeks, covering all charges for instruction for a registration of fifteen hours a week, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

For residents of Maine, $12.00.

For residents of other states, $18.00.

Board and room in the university buildings, including light and the necessary furniture, $24 for the term. The charge for rooms without board is $1.00 per week; and for board at the Commons $3.50 a week. Board may also be had at the Mount Vernon House for $5.00 a week.

Recreation

Most of the class work is held during the forenoon, leaving the afternoon and evening free for study and recreation.

On the campus are several excellent tennis courts. The neighboring country affords many attractive excursions, on foot, by bicycle, carriage, or electric cars. Maine's famous seaside resort, Bar Harbor, is but one and one-half hours distant by rail, while Mount Kineo and Moosehead Lake are at only a slightly greater distance and easily accessible.

Within easy riding or wheeling distance are Lakes Pushaw and Chemo, as well as several attractive mountains.

In General

Prospective students are invited to consult Dean Stevens, who is in charge of the summer session, or any of the other instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privileges.

If there should be a considerable demand for other studies than those named, arrangements will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1910. Unimportant changes are likely to be made for the coming term.

DEPARTMENT OF EDUCATION

Advisory Courses

For students who are preparing to teach in secondary schools the following courses have been arranged for (1) teachers of English, (2) teachers of Latin, (3) teachers of Modern Languages, (4) teachers of Mathematics, (5) teachers of Physical Sciences, (6) teachers of Natural Sciences, (7) teachers of Agriculture. These courses are advisory only, and election must be made subject to the requirements of the time schedule, but it is believed that they will be of assistance in determining the relative importance of subjects aside from the major subject chosen.

Freshmen are advised to take the required subjects with the following additions: for (1), any language, preferably Latin, and History 1 and 2; for (2), Latin 1 and 2 and one science; for (3), the modern language not taken in preparation and Latin 1 and 2; for (4), German 1 and 2 and Chemistry 1, 2, 3, and 4; for (5) and (7), a modern language and Chemistry 1, 2, 3, and 4; for (6), a modern language and Biology 1 and 13.

For upper classmen, the following electives are advised:

For teachers of English:

Sophomore Year

First semester: English 2a, 3, and 3a; German 1 or 1a; French 3a or 1; Chemistry 1, 3; History 3; Education 1.

Second semester: English 2b, 4, 7, 8b; German 2 or 1b; French 3b or 2; Chemistry 2, 4; History 4; Education 2.

Junior Year

First semester: English 10, 12, 15, 17; Education 3; Economics 1a; Philosophy 1a.

Second semester: English 11, 13, 14; Education 4; Economics 2a; Biology 4.

Senior Year

First semester: English 19a, 20, 23a; Education 3; History 5 and 6; Philosophy 3.

Second semester: English 21, 23, English course on secondary requirements; Education 6, 8; History 7; Philosophy 4.

For teachers of Latin:

Sophomore Year

First semester: Latin 3, 6; English 2a, 6; second year of modern language; History 1; Education 1; mathematics or science.

Second semester: Latin 4, 6; English 2b, 7; second year of modern language; History 2; Education 2; mathematics or science.

Junior Year

First semester: Latin 7, 9, 6, 11; third year of modern language; Economics 1a; Education 3.

Second semester: Latin 8, 10, 6, 12; third year of modern language; Economics 2a; Education 4.

Senior Year

First semester: Latin 15, 19a, 18, 13; English 8; third year of modern language; Philosophy 1a; Education 5.

Second semester: Latin 16, 19b, 20, 21, 14, review of secondary texts; Philosophy 7; Education 6, 8.

For teachers of Modern Languages:

Sophomore Year

First semester: German 3a; French 3a; Latin 3; English 2a, 6; History 1; mathematics or science.

Second semester: German 3b; French 3b; Latin 4; English 2b, 7; History 2; mathematics or science.

Junior Year

First semester: German 4a, 5a, 11; French 4a, 5a; Education 1; Economics 3a.

Second semester: German 4b, 5b; French 4b, 5b; Education 2; Economics 8.

Senior Year

First semester: German 7a, 8a; French 6b, 7; Spanish or Italian; Philosophy 1 or History 11; Education 5.

Second semester: German 7b, 8b; French 6a, 7b, Spanish or Italian; Philosophy 7 or History 12; Education 8.

For teachers of Mathematics:

Sophomore Year

First semester: Mathematics 6b, 7; English 2a; German 3a; Physics 1; Drawing 1; Education 1.

Second semester: Mathematics 8; English 2b; German 3b; Physics 2, 5; Drawing 2; Education 2.

Junior Year

First semester: Mathematics 20a, or 12; French 1 or 3a; Physics 10, or Physics 19; Education 3; Philosophy 1.

Second semester: Mathematics 11, 9, 15, or 13; French 2 or 3b; Education 4; Philosophy 7.

Senior Year

First semester: Mathematics 10, 12, or 20a; Economics 1a; History 5 and 6; Education 5.

Second semester: Mathematics 13 or 15, review of secondary mathematics with methods; Physics 9; History 7.

Fo rteachers of Physical Sciences:

Sophomore Year

First semester: Chemistry 23, 14; German 3a or French 3a; Mathematics 6b, 7; English 2a; Education 1.

Second semester: Chemistry 6, 15; Mathematics 8; German 3b or French 3b; English 2b; Education 2.

Senior Year

First semester: Chemistry 8; Physics 1; Biology 1; English 8a; Education 3.

Second semester: Chemistry 7; Physics 2, 5; Botany 1; English 8b; Education 3.

Junior Year

First semester: Chemistry 16; Physics 10, 9, 19; Economics 7a; History 5 and 6; Education 5.

Second Semester: Chemistry 18; Physics 8 or 7; Physics 3, methods for secondary schools; Economics 8; History 7; Education 8.

For teachers of Natural Sciences:

Sophomore Year

First semester: Zoölogy 4, 7; Botany 1; Chemistry 1, 3; English 2a; German 4a, or French 4a; Education 1; Drawing 1.

Second semester: Zoölogy 1, 8; Chemistry 2, 4; English 2b; German 4b or French 4b; Education 2; Drawing 2.

Junior Year

First semester: Botany 3; Zoölogy 2; English 6; Physics 12; Education 3.

Second semester: Zoölogy 3, 10; Botany 4, 5; English 7; Physics 5; Education 4. Zoölogy 10 or Botany 4.

Senior Year

First semester: Elective biology; Economics 3; Education 5; English 8a; History 7.

Second semester: Zoölogy 5, elective biology; Economics 6; English 8b; Education 8; History 8.

Note—As a preparation for the course in Latin, students should have taken four years of Latin and either three years of Greek or two of one modern language and one of another in the secondary school. If the student desires to prepare to teach both Greek and Latin, he should take three years of Greek and four of Latin in college. If he would omit Greek, he should take one year of the modern language in which he had most credits when he entered and two of another.

DEPARTMENTS OF INSTRUCTION

Note:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek.

ASTRONOMY

Courses in astronomy are described under the department of mathematics.

BIBLIOGRAPHY

Professor Jones

1. Bibliography.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbinding and the care of books; library processes and aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.* Spring semester.

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen. Fall semester.

BIOLOGICAL CHEMISTRY

The courses in this department are described under the College of Agriculture.

BIOLOGY

Professor Drew; Professor Chrysler; Mr. Conser; Doctor Boring

The course in General Biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

1. General Biology.—This course is designed to be part of the education of any college student and is open to all candidates for the B. A. degree, as well as to more special students. It is regarded as essential for all students in the College of Agriculture, including those taking the Forestry Curriculum, as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further work in either zoölogy or botany. In the laboratory each student studies with the microscope, or dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily.

Recitations, *three hours a week;* laboratory, †*four hours a week.* Throughout the year.

Zoology

2. Vertebrate Zoölogy.—Types of the Vertebrata are studied and their structures compared. Careful dissections are made of representatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by General Biology. Recitations, *two hours a week;* laboratory, †*four hours a week.* Fall semester.

3. Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and the methods of preparing them for microscopic study. Students thus becoming familiar with hardening, embedding, sectioning, staining, and mounting, and to some extent with injecting blood vessels for the microscopic study of the vascular supply of organs. Vertebrate Zoölogy is required as a preparation for this course. Recitations, *two hours a week;* laboratory, †*four hours a week.* Fall semester.

5. Animal Physiology.—This is intended for those who already have an elementary knowledge of general biology and physiology. The course deals with the functions of the organs of the body and is accompanied by laboratory work to illustrate their activities. It should be preceded by Animal Histology. Recitations, *three hours a week;* laboratory, † *four hours a week.* Spring semester.

6. Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes recitations on the comparative embryology of vertebrates and laboratory work on the frog, fish, and chick, and to some extent on the pig. Animal Histology is desirable as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

7. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

8. Entomology.—This course opens with the study of the anatomy and development of insects, after which typical species of the Orders are studied with reference to their structure, habits, life-histories, and adaptations. Due attention is given to the economic problems. General Biology is required as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

9. Forest Zoölogy.—This course deals with the animals that are of economic importance in forests. A portion of the time is given to the study of economic problems with which mammals and birds are concerned and the remainder to the study of the habits, life-histories, and methods of control of injurious and beneficial forest insects. Entomology is required as a preparation. Recitations, *two hours a week.* Fall semester.

Botany

10. Plant Histology.—The microscopic structure of the higher plants; the various tissues; the root, stem, leaf, and spore-bearing organs; the adaptations of plants to external conditions, considered from

the standpoint of structure; killing, sectioning, staining, and mounting of plant tissues. This course must be preceded by General Biology. Recitations, *two hours a week;* laboratory, †*four hours a week.* Fall semester.

11. Plant Physiology.—The plant is considered from the standpoints of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth, movement in response to stimuli. This course must be preceded by General Biology, and should follow Plant Histology. Recitations, *two hours a week;* laboratory, †*four hours a week.* Spring semester.

12. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. Courses which have recently been given under this caption include: Morphology of Pteridophytes; Structure and technology of woods; Structural and physiographic Ecology; Advanced Plant Physiology; Special problems assigned to individuals. *The time varies and the work may be continued a number of semesters.* Fall and spring semesters.

13. Elementary Botany.—Studies in the structure and functions of the organs of plants; agents of pollination and the distribution of seeds and fruits; exercises in plant analysis and the identification of species in the field. Required of Short Pharmacy students. Recitations, *one hour a week;* laboratory †*four hours a week.* Spring semester.

14. Pharmaceutical Histology.—Exercises on the use of the microscope; the magnification of objects and microscopic measurements. A study of cells and tissues, and food products found in them; followed by exercises in the detection of the common adulterants of familiar drugs. Open to students who have taken elementary botany. Recitations, *one hour a week;* laboratory, †*four hours a week.* Fall semester.

15. Agricultural Botany.—This course deals with the special botany of farm crops and forage plants; the distribution and habits of growth of weeds. Some systematic study of Maine weeds and grasses is required, but greater attention is given to the structure and life processes of the plants under consideration for economic ends. General Biology is a prerequisite. Recitations, *two hours a week;* field or laboratory work, †*two hours a week.* Fall semester.

16. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by General Biology and may profitably be preceded by Plant Histology. Recitations, *two hours a week;* laboratory, †*two hours a week.* Spring semester of odd years.

17. Forest Botany.—This course consists of a systematic study of trees and shrubs, particular attention being given to those of the eastern states, and the identification of them in summer and winter aspects. Special attention is given to the forest trees of commercial value and their geographical distribution. Field work in the identification of local species and preparation of a forest herbarium are required in the autumn and early winter months. The laboratory work includes a study of the microscopic structure of the vegetative and reproductive parts of typical gymnosperms and angiosperms of arboreal habit. This course must be preceded by General Biology. Recitations, *two hours a week;* laboratory, †*four hours a week.* Throughout the year.

CHEMISTRY

The courses in this department are described under the College of Technology.

ECONOMICS AND SOCIOLOGY

Professor Sprague

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics, production, distribution and consumption, values, commerce, labor problems, and various other topics in this field of study. Required of junior engineers and of all who take course 1b. Open to others by special permission. Textbook and general discussions. *Two hours a week.* Fall semester.

1b. Advanced Political Economy.—This course is devoted to a more exhaustive study of special subjects in the economic field, labor unions, methods of arbitration, tariff history and problems, trusts and their regulation, railroads, insurance, business organizations, immigration, exhaustion of natural resources, and other special topics. This course is open to all who have had or are taking course 1a. Lectures, readings, papers and discussions. *Three hours a week.* Fall semester.

2a. Money and Banking.—An introductory course to the study of money, banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take course 2b. Open to others by special permission. Text-book and lectures. *Two hours a week.* Spring semester.

2b. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. Open to all who have taken or are taking course 1a, to others only by special permission. *Three hours a week.* Spring semester.

3a. Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the state and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. General sociological theory will occupy the last weeks of the semester. This course is open to those who have taken course 1a, and to others only by special permission. Students planning to take this course are advised to take course 3b the preceding year, although it would be possible to take both courses in the same year. Lectures, readings, and discussions. *Three hours a week.* Fall semester.

3b. Anthropology.—The evolutionary origin and history of man; characteristics of primitive man; departure from the animal status and beginnings of civilization; development of industries, arts, and sciences; growth of language, warfare, migrations, and social institutions. Open to all students. Students planning to specialize in economics are advised to take this course before taking course 3a. Text-book and lectures. *Two hours a week.* Given in the fall term of even years.

4a. Social Reforms.—Socialism, communism, and communistic settlements, anarchy, nihilism, European systems of workingmen's insurance, trade union, relief associations, and other efforts providing against old age and misfortune. Lectures and readings. Open to those who have taken course 3a and to others by special permission. *Three hours a week.* Spring semester.

4b. Ethnology.—Principles underlying racial distinctions. The origin and characteristics of races or general ethnic groups. The great migrations and changes worked by new environments and conflicts. Modern racial problems in America, Europe, and Asia. Open to those who have taken courses 3a or 3b. Lectures, readings, and discussions. *Two hours a week.* Given in the spring semester of odd years.

5. International Law.—The principles, history, and prominent "cases" of international law take up most of the course. Considerable attention will be given to American diplomacy and the most important foreign treaties. Text-book, lectures, and discussions. *Two hours a week.* Fall semester of odd years.

6. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights; contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week* Spring semester.

7a. Governments of Europe.—A brief review of the ancient types of government followed by a detailed comparative study of modern European national governments. Political parties and current national problems will receive some attention. Lecture course with readings. *Two hours a week.* Fall semester.

7b. Municipal Government.—A study of the systems of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. Lectures and readings. *One hour a week.* Given in the fall semester of even years.

8. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. Lectures and readings. *Two hours a week.* Spring semester.

9. Democracy, Its History and Institutions.—The class will study the beginnings and development or early forms of Democracy and trace

the great world movement down through the ages to the present. The greater part of the time will be given to a study of the current democratic movements in Europe, Australasia, and the American States. Lectures and readings. *Two hours a week.* Given in the spring semester of even years.

10. Economic History.—The leading facts of the economic history of Europe and America, introducing the student to the fundamental causes which lie behind much of narrative history, and examining the material and industrial resources which make the wealth of nations. Lectures and readings. Open to all students. Recommended for students planning to take other economics courses. *Two hours a week.* Given in the fall semester or odd years.

Suggestions for students planning to major in Economics and Sociology.

Freshman Year:

No major work should be taken, but the time should be given to the completion of required subjects.

Sophomore Year:

History of all kinds is desirable but "Medieval and Modern History" and the "Social and Industrial" History of Europe and America are especially advised. Biology and psychology are also useful in preparation for the major studies.

Ec 1a and Ec 2a, or Ec 7a and Ec 9a, or Ec 3b and Ec 4b, or Ec 5 may be taken, but never more than two of these courses.

Junior Year:

Any of the "Economics and Sociology" courses suggested for the Sophomore year and not taken should be finished this year. Economics should be completed if convenient.

Senior Year:

Ec 3a, Ec 4a, and Ec 6 should be completed in this year.

The graduating thesis should be arranged for at the beginning of the year and completed by March 1 previous to graduation.

Summer Term

Money and Banking.—An introductory course to the study of money,

banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take course 2b. Text-book and lectures. This course is 2a in the catalog.

Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the state and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. General sociological theory will occupy the last weeks of the term. Lectures, readings, and discussions. This course is 3a in the catalog.

Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-books, readings, and discussions. This course is 6 in the catalog.

EDUCATION

Professor Davidson

1. History of Education.—From the Greeks to Rousseau. Ideals of education at each stage of development; their sources, and modification through the intellectual life and convictions of the people; organization of instruction and the results obtained. *Three hours a week.* Fall semester.

2. History of Education.—Course 1 continued,—the development of education traced down to the present time. *Three hours a week.* Spring semester.

3. Organization and Administration.—Growth of present conceptions of education in the United States; organization of education in the different states; also in Germany, France, and England; comparative study of education in three typical states—Massachusetts, New York, and California—and special study of the school system of Maine. *Three hours a week.* Fall semester.

4. Organization and Administration Continued.—Problems within the state; town schools and city schools; duties of all officers; certification; of teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.* Spring semester.

5. Foundations of Education.—Avenues through which knowledge reaches the child and methods of effective approach. Training in analysis, synthesis, and reasoning; inculcation of habits of attention, discrimination, judgment; methods of imparting instruction by topical recitation, question, and exposition; the use of examination, note-book, library, and laboratory methods. *Three hours a week.* Fall semester.

6. Special Methodology.—All high school teachers, principals, and superintendents should be specialists in some high school subject. After conference with his major instructor, a course of study, reading, and practice will be mapped out for each student, in the methods most applicable in his specialty. *Two hours a week.* Spring semester. Open to those only who have taken Course 5.

8. Child Study.—The physical child. Order of development of the mental powers; adolescence; adaptation of studies to the child. *Two hours a week.* Spring semester. Open to those only who have taken Course 5.

9. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory in our public schools. Among the problems that students investigate are:

1. The introduction of motor activities in the first four grades.

2. The value of percentage grading in estimating acquired power and knowledge in the higher grades.

3. The causes that lead pupils to leave school at or before the completion of the work of the grammar grades.

4. The value of repeating the year when pupils of the grammar grades fail of promotion, etc. *Two hours a week.* Fall semester.

Summer Term

(Professor Bell)

1. Principles of education.—The design of the course is to set forth (1) the meaning and aims of education as related to the individual and society; (2) the relative educational value of studies and their organization into the curriculum, as indicated by the recapitulation, culture epoch, formal discipline, and other theories; and (3) the methods of teaching as determined by the mental processes involved, particularly, instinct, habit, attention, interest, apperception, induction, and deduction.

2. Foundations of Education.—Studies in the nervous and mental organization of man with special reference to his capacity for education. The central nervous system, the brain, and the special senses will be studied with reference to their functions and contributions to education. Speech and the higher mental processes will be considered to establish a scientific procedure in instruction.

3. Child Study.—Studies of the child from birth to maturity; the physical child; the order of development of the mental powers; adolescence; adaption of studies to the child.

ENGLISH

Professor Gray; Professor Thompson; Professor Daggett; Professor Weaver; Mr. Prince; Mr. Ketcham

Two credits in English are required for graduation. Courses 3 and 4 which are prescribed for freshmen, give 1 1-5 credits. The remaining 4-5 credit is regularly obtained by taking courses 1a and 1b, 2a and 2b, or 2c and 2d.

Courses in this department should be taken in the following order:

First year: Courses 3, 4, 1a and 1b, 8.

Second year: Courses 2a and 2b, or 2c and 2d, 6, 7, 8, 23, perhaps 5a and 5b, 15, 20, 21.

Third year: Courses 9, 10a and 10b, 11a and 11b, 12a and 12b, 13, 15, 16, 18a and 18b, 19a and 19b, 20 and 21.

Fourth year: Courses 10a and 10b, 12a and 12b, 13, 9a and 9b, perhaps 23, 24, 25, 26.

Students are expected to consult the head of the department, if they find it necessary to make a change.

Courses in Composition

3. English Composition and Rhetoric.—The object of this course is to give training in writing correct and clear English. One composition written outside of class and about two themes written in class are required each week. The theoretical work consists in the study of the fundamental principles of good usage in English writing; and of the narrative and descriptive forms of composition. In illustration of the theory many selections from literature are studied. This course is prescribed for freshmen. Each section is limited to twenty students. *Two hours a week in sections, and one hour a week in one section.* Fall semester.

4. English Composition and Rhetoric.—The object of this course is the same as in course 3. The theoretical work consists in a study of the more elementary principles of exposition and argumentation. Practice in making outlines and briefs; themes and fortnightly essays. This course is prescribed for freshmen. Each section is limited to twenty students. *Two hours a week.* Spring semester.

2a and 2b. Expository Composition.—A lecture course of one hour on the theory of exposition. A second hour is devoted to writing in order to cultivate facility; monthly essays and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

2c and 2d. Argumentative Composition.—A lecture course of one hour on the theory of argumentation. A second hour is devoted to making briefs and writing short arguments in order to cultivate logical methods and facility; monthly essays, and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

Sophomores are required to register for either 2a and 2b, or 2c and 2d. These courses may not be postponed until the junior or senior year, without permission of the head of the department. English 3 and 4 are pre-requisites.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Pre-requisites: English 3, 4, 2a, and 2b, or 2c and 2d, and 8. *Two hours a week.* Fall semester.

Courses in Public Speaking

1a and 1b. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first term consists in voice training by means of practice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second term the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students' own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. During the year the sections will meet *once a week.* The assignment of sections is made by the instructor in the second week of the semester.

18a and 18b. Debating.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading questions of the day debated. *Two hours a week.* Pre-requisites 1a and 1b, 3, 4, 2c, and 2d. Given in 1911-1912.

22. Oral English.—A fundamental course in voice production, diction, and interpretation of literature. Practice in reading lyric, narrative, and dramatic forms with constant application to the requirements of public speech. *Three hours a week.* Fall semester.

23. Public Speaking.—Forms of address. A study of persuasion applied to letters, editorials, and speeches for various occasions. Preparation of public addresses, and practice in extempore speaking. *Three hours.* Spring semester.

Courses in Language and Literature

5a. Old English (Anglo Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of old English grammar; reading of easy prose and poetry. Constant reference is

made to the relation of old English to modern English and modern German. Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Fall semester. Given in odd years.

5b. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary and archæological interests. *Three hours a week.* Spring semester. Given in odd years. Pre-requisite 5a.

6. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall semester.

7. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring semester.

8a. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the freshman or sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.* Fall semester.

8b. History of English Literature.—A continuation of 8a, covering the periods from the seventeenth century to the present day. *Three hours a week.* Spring semester.

9a. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader. Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Fall semester. Pre-requisite 5a. Given in even years.

9b. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical, and literary interests. *Three hours a week.* Spring semester. Given in even years.

10a. Shakspere and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakspere, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakspere, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Fall semester. Given in odd years.

10b. Shakspere.—A detailed study of three or four of the great tragedies of Shakspere. *Two hours a week.* Fall semester. Given in odd years.

11a. American Literature.—A lecture course giving an historical outline, with assigned reading. *Two hours a week.* Fall semester. Prerequisite 8a and 8b.

11b. American Literature.—A continuation of 11a. *Two hours a week.* Spring semester.

12a. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.* Fall semester. Given in odd years.

12b. The Novel.—A continuation of 12a. *Two hours a week.* Spring semester. Given in odd years.

15. Victorian Poets.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in these poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.* Fall and Spring semesters.

16a. History of English Literature.—A lecture course giving a brief survey of the development of English literature, extending to the close of the sixteenth century. Assigned reading and reports. *Two hours a week.* Fall semester. Open to technical students only.

16b. History of English Literature.—This course continues the work of 16a, covering the periods from the sixteenth century to the present time. *Two hours a week.* Spring semester. Open to technical students only.

19a. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Fall semester. Given in odd years.

19b. Elizabethan Poetry and Prose.—A continuation of course 19a. The study of Elizabethan poetry will be completed, and the larger part of the semester given to the study of the prose of the period. *Two hours a week.* Spring semester. Given in odd years.

20. English Romantic Poets.—A general view of the English Romantic Movement with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thomson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Fall semester. Given in even years.

21. English Romantic Poets.—A continuation of course 20. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Spring semester. Given in even years.

Courses Primarily for Graduates

5a and 5b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates.

22. Cynewulf.—Reading of The Christ, and The Elene; and possibly some of the poems attributed to Cynewulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Pre-requisites, 5a and 5b. *Three hours a week.* Fall semester.

9a and 9b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates. Pre-requisites, 5a and 5b.

23. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.* Fall and spring semesters.

24. The Victorian Period (1830-1900).—A study of the literary, social, and scientific movements in England and America, the rise of

periodical literature, tractarianism, Pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thackeray, George Eliot, Jane Austin, and the Brontes. *Two hours a week.* Fall and spring semesters.

25. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, drama, and the English metres. *One hour a week.* Spring semester.

26. History of the English Drama.—Especial attention is given to the immediate predecessors, and the contemporaries of Shakspere. *Three hours a week.* Given in even years. Fall and spring semesters.

30. Literary Seminary.—Subject for 1910-1911: Various topics and problems connected with the study of the drama as a literary form. Fall and spring semesters.

Summer Term

1. A course in preparatory English for the benefit of students who have entrance credits to make in this department.

2. English Composition and Rhetoric.—The work in this course is similar to that of the fall semester of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-books used will be Woolley's Handbook of Composition, Carpenter's Model English Prose, Gray's College Theme Tablet.

3. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work consists of voice training by means of practice work in classes, reading aloud for interpretation, and the acquirement of ease in pose and gesture. A special point is made of correct pronunciation.

4. Public Speaking.—In this course the training acquired in course 1 will be applied to the delivery of model public orations, and especially to the speeches of the students' own composition. Attention will be given to the correction of individual faults. Courses 1 and 2 will occupy two hours each per week and may be taken by university students as a substitute for English 1a and 1b.

5. Nineteenth Century Literature.—This course consists of a study of the social and literary impulses of the early nineteenth century, and considerable reading in such prose writers as Carlyle, Emerson, Newman, Ruskin, Arnold, and Stevenson; and in such poets as Wordsworth, Coleridge, Byron, Shelley, and Keats.

6. The Development of the Drama.—The origin and growth of the drama is traced down to the closing of the theatres. Typical plays are read and discussed. If there is time, an early, and a late play of Shakspere will be read.

7. Old English (Anglo-Saxon).—This course consists of a study of English literature between the 8th and the 12th centuries. Selections from Anglo-Saxon prose and poetry are read with attention to grammar, phonology, the relation of the Anglo-Saxon to modern English, archaelogical, historical, and literary interests. This course is offered especially for those who intend to teach English, and will be given if a sufficient number elect it.

GERMAN

Professor Thompson; Doctor Drummond

1 and 2. First Year German.—A course for beginners. Joynes-Wesselhoeft German Lesson Grammar; composition; numerous texts read; conversation. *Five hours a week* throughout the year.

3a, 3b. Second Year German.—A course for students who have had courses 1, 2 or equivalent. The grammar study, composition and text reading are progressively advanced from courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

4a, 4b. Third Year German.—A course for students who have had courses 1 and 2 and 3a, 3b or equivalent. Texts include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week* throughout the year.

5a, 5b. Fourth Year German.—An advanced course for students who have had courses 1, 2, 3a, 3b and 4a, 4b or equivalent. Texts include 19th century literature; advanced composition with original themes; lectures on history of German literature completed. *Three hours a week* throughout the year.

These courses are carefully graded in difficulty and are to be taken in the order named.

For the convenience of engineering students and those who cannot take courses 1 and 2 (five hours a week) the following two courses are offered in which the work of courses 1 and 2 can be completed in two years.

1a 1b. Elementary German.—Study of grammar, composition and easy texts which contain a practical vocabulary. *Three hours a week.* Fall semeste.r *Two hours a week.* Spring semester.

2a, 2b. Continuation of Course 1a, 1b.—More advanced study of grammar, composition and texts. Open to students who have completed courses 1a, 1b or equivalent. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

Note.—Course 2a, 2b is not equivalent for course 3a, 3b.

6a, 6b. German Conversation.—*Two hours a week* throughout the year.

7a, 7b. Faust.—Reading of Faust (first part); selection from second part; study of Faust literature; lectures on the origin and development of the Faust idea. *Two hours a week* throughout the year.

8a, 8b. History of German Literature.—Lectures with assigned readings. *One hour a week* throughout the year.

9a, 9b. History of the German Novel.—Lectures given in even years. *Two hours a week* throughout the year.

10a, 10b. History of the German Drama.—Lectures given in odd years. *Two hours a week* throughout the year.

11a, 11b. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week* throughout the year.

12a, 12b. History of German Education.—Lectures. *One hour a week* throughout the year.

13a, 13b. Old High German.—Wright's Old High German Primer; Braune's Althochdeutsches Lesebuch. Open to graduates and those whose major is German. *Two hours a week* throughout the year.

14. Gothic.—Conditions for electing this course are the same as for course 13a, 13b. Wright's Gothic Primer. *Two hours a week.* Fall semester.

15. Middle High German.—The conditions for electing this course are the same as for course 12 and 13. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.*

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

Summer Term

(Professor Thompson).

1. Elementary Course.—For those who wish to acquire or review the essentials of German grammar and the foundations of a German vocabulary.

2. Second Year German.—This course is designed for students who have completed a year's work in German or for such teachers as may wish to review their work in this department.

3. Conversational German.—For those who have taken at least one year of German and wish to get practice in speaking and hearing German. German stories will be reproduced orally and in writing. There will also be German dictation and memorizing of German songs. *Twice a week.*

4. German Literature.—A brief course of lectures covering a period of German literature. This course is designed for advanced students. *Three times a week.*

Other advanced courses in German may be substituted for Courses 2 and 4 if they seem better adapted to the needs of the students.

GREEK AND CLASSICAL ARCHAEOLOGY

PROFESSOR HUDDILSTON

The department of Greek is arranged with the idea of presenting to the student an opportunity of becoming acquainted with several phases of Hellenic civilization and such courses are offered as will prove serviceable not only to those pursuing the classical languages but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college curriculum some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

Courses 1-10 cover the field of Greek language in its several periods of poetry and prose and assume the usual preparatory work in Greek.

1. XENOPHON.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall semester.

2. HOMER.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring semester.

3. ATTIC ORATORS.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall semester.

4. GREEK TRAGEDY.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring semester.

5. THUCYDIDES.—Books II-III. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Three hours a week.* Fall semester. Open to students who have taken courses 1 and 3.

6. Aristophanes.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. Open to students who have taken courses 2 and 4. *Two hours a week.* Spring semester.

7. Plato.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. Open to students who have taken courses 3 and 5. *Two hours a week.* Fall semester.

8. Pindar.—The Olympian and Pythian Odes; supplementary reading on the history of Greek lyric poetry. *Two hours a week.* Spring semester.

9. Greek Prose Composition.—A course in writing Greek, intended to continue the work begun in course 1. *One hour a week.* Spring semester.

10. Greek Prose Composition.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall semester.

Courses 11-17 offer an introduction to the literature, religion, customs, art, and history, and are adapted to the needs of students who may wish to devote only a year or two to Greek subjects.

11. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of Greek based on the text. *Five hours a week.* Fall semester.

12. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose selections from Homer's Iliad. *Five hours a week.* Spring semester.

13. Greek Private Life.—Lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.* Given in the fall semester.

14. Greek Religion.—A study of the chief divinities in ancient Greek religion. Lectures and assigned reading. Investigation of special topics by members of the class. *Two hours a week.* Given in the spring semester.

15. Greek Literature.—A general view of the rise and development of the literature of ancient Greece with special emphasis upon the literary standards established by the Greeks; assigned readings in translation and investigation of special topics supplemented by lectures. *Three hours a week.* Fall semester of odd years.

16. Greek History.—A brief survey of the Pre-Greek nations with reference to their legacies to civilization, followed by the history of Greece from the earliest times down to the absorption of Greece by Rome. The development of political ideals, and the forces that were basal in Greek civic life and government will be kept to the front. Oman's History of Greece will be used, accompanied by collateral reading and lectures. Open to all students. *Three hours per week.* Fall semester of even years.

17. Greek Fine Arts.—The entire question, so far as time allows, of the development of art among the ancient Greeks will be discussed in lectures illustrated by the use of the stereopticon and photographs. Greek sculpture as representing the largest part of the extant remains of ancient art will receive the most attention; but the survey will include architecture, and painting, and the minor art of pottery. The aim of the course will be to present a definite notion of the part that art played in the intellectual life of the Greeks and the significance of this legacy to succeeding ages. *Three hours a week.* Spring semester.

18. History of Old Testament Literature.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Old and New Testament Canons will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Fall semester. Not given in 1910-11.

19. History of New Testament Literature.—A continuation of course 18. Open to all students. *One hour a week.* Spring semester. Not given in 1910-11.

The following courses in the history of art bearing chiefly upon the influence of classical ideals in the Italian Renaissance are given at present as under the department of Greek:

1. Art.—The revival of the fine arts in Italy, with special reference to the history of painting in Tuscany and Umbria during the early Renaissance. Lectures and collateral reading. The work is illustrated by a large and growing collection of photographs and casts. *One hour a week.* Fall semester of even years.

2. Art.—A continuation of course 1, dealing chiefly with the masters of the high Renaissance in Florence and Rome. *One hour a week.* Spring semester of odd years.

3. Art.—Painting in the north of Italy, and the culmination of the Italian Renaissance in the Venetian masters. Lectures and collateral reading. *One hour a week.* Fall semester of odd years.

4. Art.—A continuation of course 3. *One hour a week.* Spring semester of even years.

5. Architecture.—A chronological survey of the development of ancient and modern architecture down to 1600 A. D. Greek and Roman architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures, outside reading, and detailed study of the reproduction in the Art Collection. Open to all students. *Two hours per week* for the year. Given in 1910-11.

6. Architecture.—A continuation of course 5. *Two hours a week.* Spring semester. Given in 1910-11.

HISTORY

Professor Colvin

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesiastical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Open to all students. *Three hours a week.* Fall semester.

2. Modern History.—Continuation of course 1 to the present time. A rapid survey of the Reformation; the absolute monarchy in France; the French Revolution; the Napoleonic era; Europe in the nineteenth century. Open to all students. *Three hours a week.* Spring semester. *Courses 1 and 2 will be given in 1910-11.*

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Open to all students. *Three hours a week.* Fall semester.

4. History of England.—Continuation of course 3. From the beginning of the Stuart period to the present. Open to all students. *Three hours a week.* Spring semester.

Courses 3 and 4 are given in 1909-10.

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.* Fall semester.

6. History of the United States.—The period from 1783 to the beginning of Jackson's administration. This course will begin with a brief study of Colonial history from 1750. Open to all students. *Three hours a week.* Fall semester.

7. History of the United States.—A continuation of course 6, through the Period of Reconstruction. Open to all students. *Three hours a week.* Spring semester.

8. Industrial and Social History of England.—The medieval manor, town, guild, and foreign trade; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. *Two hours a week.*

[The following courses are open only to advanced students.]

9. The Renaissance and the Reformation.—The period from 1300 to 1648 A. D. *Two hours a week.*

10. The Renaissance and the Reformation.—A continuation of course 8. *Two hours a week.*

11. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

12. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

13. Modern Continental Europe.—The period since 1815. *Three hours a week.*

14. Historical Construction and Criticism.—*One hour a week.*

Greek History and Roman History are given in the departments of Greek and Latin.

Summer Term

(Professor Gettell)

1. United States History.—A brief course of two recitation periods a week, reviewing the work done in preparatory school. This course is designed to prepare a student who has taken the course in United States History for the entrance examinations of the University.

2. English History.—This course will be given three times a week, and has a purpose similar to that of the course in United States History.

3. Modern European History.—A course designed for teachers and graduate students. It covers the history of Western Europe from 1500 to date. *Five hours a week.*

4. Advanced History.—A course in Advanced History will be offered to graduate students and others who are prepared to take it. The character of the work will be determined by the requirements of the students who elect it.

LATIN

Professor Chase

Courses in Latin 1, 2, fulfill the classical requirements for the B. A. degree.

1. Livy and Composition.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four times a week.* Fall semester.

2. Cicero and Horace.—Cicero, De Senectute; Horace, Odes and Epodes; Latin composition. *Four times a week.* Spring semester.

Courses 1 and 2 are required of candidates for the B. A. degree who elect Latin.

3. Terence and Plautus.—The Andria, Adelphoe, or Phormio of Terence; the Captivi, Trinummus, or Menaechmi of Plautus; lectures on the development of Roman comedy. *Three times a week.* Fall semester.

4. Tacitus and Cicero.—The Agricola and Germania of Tacitus; selected letters of Cicero. *Three hours a week.* Spring semester.

5. Latin Composition.—Practice in writing Latin; study of Latin syntax. *One hour a week.* Fall semester.

6. Latin Composition.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.* Spring semester.

7. Pliny and Tacitus.—Selected letters of Pliny the Younger; readings in the Annals of Tacitus; the Roman Empire. *Two hours a week.* Given in the fall semester of even years.

8. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; lectures on the elegiac poets. *Two hours a week.* Given in the spring semester of odd years.

The following may be counted toward the Master's degree:

9. Roman Satire.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius. Open to students who have taken, or are taking, courses 3-4, or 7-8. *Two hours a week.* Given in the fall semester of odd years.

10. Roman Satire.—A continuation of course 9. *Two hours a week.* Given in the spring semester of even years.

11. Roman Philosophy.—Cicero (selections from the Academica, De Officiis, Tusculanæ Disputationes, De Finibus, De Natura Deorum); lectures on the history and development of ancient philosophy. Open to students who have taken, or are taking, courses 3-4 or 7-8. *Two hours a week.* Given in the fall semester of even years.

12. Roman Philosophy.—A continuation of course 11. *Two hours a week.* Given in the spring semester of odd years.

13. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken courses 1-4. *Three hours a week.* Given in the fall semester of even years.

14. Roman Literature.—A continuation of course 13. *Three hours a week.* Given in the spring semester of odd years.

15. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken courses 1-4. *Two hours a week.* Given in the fall semester of odd years.

16. Roman Rhetoric and Oratory.—A continuation of course 15. *Two hours a week.* Given in the spring semester of even years.

18. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken courses 1-4. *One hour a week.* Given in the fall semester of odd years.

19a. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages. Latin Phonetics. The development of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in the fall semester of odd years.

19b. The Latin Language.—A continuation of 19a. *One hour a week.* Given in the spring semester of even years.

20. Roman Epigraphy.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring semester of even years.

21. Teachers' Course.—Discussion of topics connected with the teaching of Latin in secondary schools. Study of selected passages of Caesar, Cicero, and Vergil. *One hour a week.* Fall semester.

22. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

23. Sanskrit.—A continuation of course 22, with more attention to the classical literature of India. *Two hours a week.*

24. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archaeology, etc. *One hour a week.* Given in the fall semester of even years.

25. Roman History.—The development of Rome to the time of Augustus. Lectures, reading, and recitations. *Three hours a week.* Given in the fall semester of odd years.

26. Roman History.—The Roman Empire. A continuation of course 25. *Three times a week.* Given in the spring semester of even years.

Summer Term

The Latin Department offers two distinctly different lines of study, intended to meet the needs of three classes of students.

1. For Teachers of Latin, and for Students wishing to gain Entrance Credits in Latin. One course is offered in Cicero's Speeches and one in Cæsar's Gallic War. In these two courses various questions connected with the teaching of Latin will be discussed, such as questions of spelling and pronunciation, of grammatical forms and inflections, of syntax, prosody, etc.; also questions of bibliography, methods of translation, history, mythology, literature, and the various aids to the elucidation of the authors studied, together with the fundamental principles of the Latin language.

2. For Students who desire College Credits looking to the B. A. degree. It is the plan of the department to offer a double course that shall cover the work of an entire college semester and be equivalent to that required for one college credit, and to vary this course from year to year so that a student in a few summers may complete a fairly comprehensive course of college study in Latin. For the summer of 1910 degree. It is the plan of the department to offer a double course that

prehensive course of college study in Latin. For the summer of 1911 it is proposed to offer a course in Pliny or Tacitus. The decision will rest with the class. We call the especial attention of secondary school teachers who have not had the advantage of complete college training in Latin to these courses, as we believe they afford an unusual opportunity to them to increase their equipment.

MATHEMATICS AND ASTRONOMY

Professor Hart; * Professor Willard; Professor Hamlin; Mr. Reed; Mr. Chambers; Mr. Wilbur; Mr. Graham

Students electing mathematics as a major subject should expect to take courses 1, 2, 4, 6, 7, 8, 11, 12, 13, 15, 19, 20, 21 and either courses 9 and 10 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

1. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book is Bush and Clarke's Solid Geometry. *Five hours a week for ten weeks.* Spring semester. Open to all freshmen who did not offer it for admission.

2. Algebra.—A brief review of the theory of exponents, quadratic equations, and the binomial theorem; indeterminate equations; logarithms, including practice in the solution of numerical exercises; undetermined coefficients; partial fractions; exponential and logarithmic series, and the computation of logarithms; permutations and combinations; theory of equations. The text-book is Hawke's Advanced Algebra. *Five hours a week.* Fall semester, last six weeks; spring semester, first eight weeks.

4. Plane Trigonometry.—The text-book is Taylor's Trigonometry. *Five hours a week.* Fall semester, first twelve weeks.

6a. Analytic Geometry.—A study of the point, line, and circle. Open to students who have taken courses 1, 2, and 4. The text-book is Smith and Gale's Introduction to Analytic Geometry. *Five hours a week.* Spring semester, last ten weeks.

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* Absent on leave.

6b. Analytic Geometry.—A continuation of course 6a. Conic sections; elements of solid analytic geometry. *Five hours a week.* Fall semester, first eight weeks.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken courses 1, 2, 4, 6a, and 6b. The text-book is Granville's Differential and Integral Calculus. *Five hours a week.* Fall semester, last ten weeks.

8. Calculus.—A continuation of course 7. Integration of the elementary forms; integration between limits; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring semester.

9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects and work in the observatory. Open to students who have taken courses 1, 2, 4, and, preferably, Physics 1 and Physics 5. The text-book is Young's Manual of Astronomy. *Three hours a week.* Spring semester.

10. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the student's own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, and vertical circle. Open to students who have taken courses 9, 4, and 19. *Two hours of recitations or lectures and two hours of observatory work a week.* Fall semester.

11. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken courses 1, 2 and 4. *Three hours a week.* Spring semester.

12. Advanced Integral Calculus.—A course based upon Byerly's Integral Calculus. Open to students who have taken courses 6, 7 and 8. *Three hours a week.* Given in the fall semester of odd years.

13. Advanced Integral Calculus.—A continuation of course 12. *Two hours a week.* Given in the spring semester of even years.

15. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken courses 7 and 8. *Two hours a week.* Given in the spring semester of odd years.

16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students who have taken courses 6, 7, 8, 9, 19, and, preferably, 10. *Three hours a week.* Given in the fall semester of even years.

17. Practical Astronomy.—A continuation of course 16. *Three hours a week.* Given in the spring semester of odd years.

19. Spherical Trigonometry.—A continuation of course 4, with additional problems and applications to spherical astronomy. *Two hours a week.* Fall semester.

20a. Advanced Analytic Geometry.—A course for students who have completed courses 6, 7, 8 and 11. *Three hours a week.* Given in the fall semester of even years.

20b. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in the spring semester of odd years.

21a. History of Mathematics.—Lectures and recitations. *One hour a week.* Given in the fall semester of even years.

21b. History of Mathematics.—A continuation of course 21a. Given in the spring semester of odd years.

22a. Analytic Geometry and Calculus.—A course given for students in Chemistry and for those in the B. A. courses who desire only a brief course in these subjects. *Two hours a week.* Given in the fall semester of even years.

22b. A continuation of course 22a. *Two hours a week spring semester.* Given in the spring semester of odd years.

Summer Term

(Professor Hart, Professor Hamlin, Mr. Reed).

1. High School Algebra.—A course intended for teachers in preparatory schools and covering the second year's work. Especial attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are also advised to take this course.

2. Plane Geometry.—A review of the more important theorems with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools and for candidates for admission who are slightly deficient in geometry.

3. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Bush and Clarke's Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Wells's, and other books will be used for reference.

4. Plane Trigonometry.—The solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which may be useful for reference.

5. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. Text-book to be selected at the opening of the term.

6. Analytic Geometry.—A brief course covering the elements of this subject.

7. Differential and Intergal Calculus.—A course intended for teachers in preparatory schools who wish to gain a knowledge of the elements of this subject.

8. Descriptive Astronomy.—Lectures accompanied by work in the observatory.

9. Analytical Geometry, the equivalent of course Mathematics 6b, in the University Catalog.

10. Calculus, the equivalent of course Mathematics 8 in the catalog.

11. Mechanics, the equivalent of course Mechanics 5 in the catalog.

12. Mechanics, the equivalent of course Mechanics 6 in the catalog.

Note:—Nine of the above courses will be given, the choice to be determined by the number of students electing.

Courses 9, 10, 11 and 12, being review courses, may be taken only by those who have previously pursued the subject.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 196.

PHILOSOPHY

Professor Craig

Students intending to major in this department should begin with courses 1 and 10. Those wishing only a minor amount of work in philosophy may begin with any course except 1b, 8, or 9.

Philosophy 6 may be counted as three hours toward the ten hours in classics required of all candidates for the B. A. degree.

1a. Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and the psychology of sensation, perception, instinct, habit, and memory. The methods used are recitation, discussion, introspection (self-observation), observation of others, experiment, and demonstration. Students electing this course are advised to precede or accompany it with biology 1; or if this be impossible, to read some good, recent book on evolution, and a similar work on human physiology. Two text-books: James's Psychology (Briefer Course); Judd's Psychology General Introduction. *Three hours a week.* Fall semester.

1b. Psychology.—A continuation of course 1, dealing especially with the higher psychic functions, such as imagination, conception, emotion, and will. All students who have taken course 1a are advised to follow it with 1b. *Three hours a week.* Spring semester.

3. Ethics.—The object of this course is to aid the student to do serious thinking on the subject of morality—including all the virtues—a subject on which every college man ought to cultivate intelligent thought. The text-book is Dewey and Tufts's Ethics. *Two hours a week.* Fall semester.

4. Social Psychology.—A study of the social aspects of the individual mind; of social influence and social control; of fashion, convention, and custom; of the crowd, the mob, the public, and the deliberative assembly. Lectures and collateral readings. *Two hours a week.* Spring semester.

5a. Inductive Logic.—A study of the method of science; the methods of gathering facts and of deriving correct conclusions from the facts. The text-book is Creighton's Logic. *Two hours a week.* Fall semester.

5b. Deductive Logic.—The purpose of this course is to develop clear thinking and the precise expression of thought in words. This is done largely by exercise in the solution of logical problems. Text-book: Creighton's Logic. *Two hours a week.* Spring semester. Courses 5a and 5b are independent of one another.

6. History of Ancient Philosophy.—Designed to give an insight into Greek and Roman thought as related to the life of the Greeks and Romans, and also to lay the foundation for a study of modern thought. Rogers's A Student's History of Philosophy is used as a text-book. Extensive selections from Plato and from Aristotle are read and discussed. *Three hours a week.* Fall semester of even years.

7. History of Modern Philosophy.—Continuation of the preceding course, but may be taken separately, having different interests, connected with modern history and modern thought in literature, science, art, and politics. Text-book as in the preceding course. Readings from Descartes, Locke, Berkeley, Hume, Kant, and other modern classical philosophers. *Three hours a week.* Spring semester of odd years.

8. Seminar.—For advanced students. Reviews of recent literature, both philosophical and psychological. The student may select literature on a topic in which he is especially interested. The work may be continued a number of semesters. *One hour a week.* Fall or spring semester.

9. Research.—Primarily for graduate students. *The number of hours a week* is not fixed, but must be arranged at the time of registration. Fall or spring semester.

10. Evolution.—The idea of evolution dominates all thought in our era. This course gives a broad and rapid survey of evolution in all its phases, cosmic, geologic, organic, psychic, and social. Lectures and collateral reading. *Two hours a week.* Fall semester.

11. Introduction to Philosophy.—Discussion of the bearing of philosophy upon science and upon life; materialism versus idealism; the relation of mind to matter; the nature of reality; the validity of knowledge; and similar fundamental problems. Text-book, Fullerton's Introduction to Philosophy. *Two hours a week.* Spring semester.

12. Readings in Modern Philosophy.—Given every other year, alternating with course 6 and 7 on the history of philosophy. This course also deals with the history of philosophy, taking up a single philosopher or a single period for intensive study. For students who are interested in history, literature, or modern thought and thinkers. *Three hours a week.* Fall semester of odd years and spring semester of even years.

PHYSICAL TRAINING

The courses in this department are described on page 197.

PHYSICS

Professor Stevens; Professor Woodman; Mr. Drew; Mr. Royal

[Note.—For students who are specializing in this department the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.]

1. General Physics.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 4. *Five hours a week.* Fall semester.

2. General Physics.—A continuation of course 1; heat and electricity. *Three hours a week.* Spring semester.

3. Qualitative Laboratory Work.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in courses 1 and 2. **Five hours a week.* Fall semester.

4. General Physics.—A course covering the ground of course 1, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Aldous's Physics. *Five hours a week.* Fall semester.

5. Laboratory Physics.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either course 1 or course 12. **Five hours a week.* Spring semester.

6. Meteorology.—A course covering the essential principles of the subject of Meteorology, including a study of meteorological instruments and weather predictions. *Two hours a week.* Spring semester of 1910-1911 and alternate years.

7. Optics.—Lectures and recitations in continuation of course 1, based chiefly upon Edser's Light. Open to students who have taken Mathematics 8. *Three hours a week.* Spring semester of 1911-1912 and alternate years.

8. Optics.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week, or five hours a week.* Spring semester.

9. Mechanics and Heat.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week, or five hours a week.* Fall semester.

10. Theory of Electricity and Magnetism.—Lectures and recitations on the mathematical theory of potential, capacity and inductance, with applications to direct current phenomena. Hadley's Magnetism and Electricity for Students is used as a text-book. *Three hours a week.* Fall semester of 1910-1911 and alternate years.

11. Electrical Measurements.—Advanced laboratory work in continuation of course 5. **Seven and one-half hours a week.* Fall semester.

12. Theory of Electricity and Magnetism.—Continuation of course 8, with applications to alternating current phenomena. *Three hours a week.* Spring semester of 1910-1911 and alternate years.

13. Heat.—An advanced course in Heat, in continuation of course 2. *Three hours a week.* Spring semester of odd years.

14. Mathematical Physics.—The application of mathematical methods to the treatment of problems in physics. The text book is Mellor's Higher Mathematics. *Two hours a week.* Spring semester of 1910-1911 and alternate years.

15. Special Laboratory Course.—A course open to students who have completed courses 9, 10, and 11. A subject is assigned for original investigation, or the work of a published research is repeated. **Five hours a week.* Fall semester.

16. Special Laboratory Course.—A continuation of course 15. **Seven and one-half hours a week.* Spring semester.

18. Electricity and Optics.—Advanced laboratory work in continuation of course 5. **Five hours a week.* Fall semester.

19. Least Squares.—A course of lectures covering the more important topics treated in this subject. Required of juniors in civil engineering and elective for others who have taken Physics 1 and 2 and Mathematics 8. *One hour a week.* Fall semester.

Summer Term

(Professor Stevens; Professor Woodman)

1. An Elementary Course.—This includes the list of experiments adopted by the Maine colleges for admission in Physics.

2. Advanced Laboratory Course.—Work in any laboratory course offered in the University may be taken by students in the summer term who are properly qualified.

3. College Physics.—A course based upon those parts of Crew's text-book in Physics which treat of mechanics, light, and sound. This course may be taken for credit only by students who have pursued the subject for a regular semester at the University.

4. College Physics.—A course based upon those parts of Crew's text-book in Physics which treat of electricity and heat. This course may be taken for credit by university students who have covered the ground in Physics 2, but have failed in the subject.

5. High School Physics.—A rapid survey of the ground covered in high school, based upon Millikan and Gale's text-book. This course is designed to meet the needs of teachers in high schools and it may be taken as a rapid review by students who have covered the ground in high school but have failed to pass college entrance examinations.

ROMANCE LANGUAGES

Professor Segall; Professor Raggio

French

1. Elementary French.—Fraser and Squair's Abridged Grammar. Syms's Reader. *Five hours a week.* Fall semester.

2. Elementary French.—A continuation of course 1. Fraser and Squair's Abridged Grammar; Verne, une Ville flottante; Muller, les Grandes decouvertes. Collateral reading: Dumas, les Trois mousquetaires. *Five hours a week.* Spring semester.

3a. French Prose.—Bruce, Grammaire française; Lamartine, Histoire des Girondins (selections); France, Livre de mon ami. Collateral reading: Bruno, le Tour de la France; Lacombe, Petite histoire du peuple francais. Open to students who have taken courses 1 and 2, or an equivalent. *Three hours a week.* Fall semester.

3b. French Prose.—A continuation of course 3a. Bruce, Grammaire française; Sand, la Mare au diable; Hugo, Quatre-vingt-treize. Collateral reading: Michelet, France et Francais; Laurie, une Annèe de collège à Paris. *Two hours a week.* Spring semester.

4a. Advanced French Prose.—Anatole France, le Crime de Sylvestre Bonnard. Composition. Collateral reading: Modern Short Stories. Open to students who have taken courses 3a and 3b, or an equivalent. *Three hours a week.* Fall semester.

4b. Advanced French Prose.—A continuation of course 4a. Contemporary story writers: D'Esparbès, Marin, Le Braz, Claretie, Coppée. Composition. Collateral reading: Rambaud, Petite historie de la civilisation française. *Two hours a week.* Spring semester.

5a. French Composition and Conversation.—Open to students who have taken courses 1 and 2, or an equivalent. *Two hours a week.* Fall semester.

5b. French Composition and Conversation.—A continuation of course 5a. *Two hours a week.* Spring semester.

6b. An Introduction into the History of French Literature.—Pellissier, Histoire de la littérature française. Lectures, recitations, reports. Open to students who have taken courses 4a and 4b. *Three hours a week.* Fall semester.

6a. An Introduction into the History of French Literature.—A continuation of course 6a. Pellissier, Histoire de la littérature française. Lectures, recitations, reports. *Two hours a week.* Spring semester.

Spanish

9a. Elementary Spanish.—Hills and Ford, Grammar; Ramsey, Reader. *Three hours a week.* Fall semester.

9b. Elementary Spanish.—A continuation of course 9a. Hills and Ford, Grammar; Alarcón, El Capitán Veneno. *Two hours a week.* Spring semester.

10a. Modern Spanish Prose.—Alarcón; Galdós; Valera. Composition. Open to students who have taken courses 9a and 9b. *Three hours a week.* Fall semester.

10b. Modern Spanish Prose.—A continuation of course 10a. *Two hours a week.* Spring semester.

Italian

11a. Elementary Italian.—Grandgent's Grammar; Bowen, First Italian Readings. Open to students who have taken courses 1 and 2. *Three hours a week.*

11b. Elementary Italian.—A continuation of course 11a. Composition; Goldoni, La Locandiera; Gherardi del Testa, L'oro e l'orpello. *Two hours a week.*

SUMMER TERM

(MR. RAICHE; MME. RAICHE)

1a. ELEMENTARY COURSE.*—This course is intended for beginners. The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 1-73.

1b. CONTINUATION OF COURSE 1a.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 73-128; Rambeau's French Reader (Henry Holt & Co.).

1c. CONTINUATION OF COURSE 1b.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 337-344; Rambeau's French Reader (Henry Holt & Co.).

2. INTERMEDIATE COURSE.—This course is intended for those who have already the required number of points for Entrance French, and who wish a course in French that may be counted towards a bachelor's degree. The text-books used will be Augier and Sandeau, Gendre de M. Poirier (American Book Co.); France, le Livre de mon ami (Henry Holt & Co.); Gasc's Concise Dictionary of the French and English Languages (Henry Holt & Co.), or Clifton & McLaughlin's New Dictionary of the French and English Language (Wm. R. Jenkins Co.). Students should bring with them their grammars.

3. CONVERSATIONAL FRENCH.—A course designed to familiarize the student with the common words occurring in daily life. Conducted by Mme. Raiche. *Three times a week.*

4. RAPID SIGHT READING.—A course for students that are sufficiently advanced in the rapid reading of a large amount of French prose and poetry. Conducted by Mme. Raiche. *Twice a week.*

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* The requirements for Entrance French may be met by taking courses 1a, 1b, and 1c in consecutive years.

† Students who already have two of the four points required for Entrance French may complete their requirements during one Summer Term by taking courses 1b and 1c.

THE COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

ROBERT JUDSON ALEY, PH. D., LL. D.
President of the University

JAMES NORRIS HART, C. E., M. S., Sc. D.
Dean of the University, and Professor of Mathematics and Astronomy

VICTOR RAY GARDNER, M. S. A.
Acting Head and Professor of Horticulture

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry

FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science

GILMAN ARTHUR DREW, PH. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages

PERCY ANDERSON CAMPBELL, M. S. A.
Professor of Animal Industry

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, PH. D.
Professor of Germanic Languages

GUY ANDREW THOMPSON, M. A.
Professor of English Literature

WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking

CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics

HENRY GOUGH BELL, M. S. A. *Professor of Agronomy*

EDGAR RAMEY WINGARD, M. S.
Director of Physical Culture and Athletics
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Botany*
JOHN MANVERS BRISCOE, *Professor of Forestry*
LEON STEPHEN MERRILL, M. D.
IN CHARGE OF AGRICULTURAL EXTENSION WORK
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
WILLIAM ARCHIBALD BROWN, M. S.
Assistant Professor of Animal Industry
ARCHER LEWIS GROVER, B. S. *Assistant Professor of Drawing*
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
LAURA COMSTOCK *Assistant Professor of Domestic Science*
GEORGE EDWIN SIMMONS, M. S.
Assistant Professor of Farm Management and Agricultural Engineering
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
WALTER EVERETT PRINCE, M. A. *Instructor in English*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
ROBERT RUTHERFORD DRUMMOND, PH. D.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
JAMES RENFREW DICE, B. S. *Instructor in Animal Industry*
WINTHA DUDOLPH PALMER, B. S. *Instructor in Horticulture*
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMUND WILBUR, B. S. *Instructor in Mathematics*
ALICE MIDDLETON BORING, PH. D. *Instructor in Zoölogy*
LLOYD MEEKS BURGHART, B. A. *Instructor in Chemistry*
VICTOR ALVIN KETCHAM, B. A., LL. B. *Instructor in English*
ARTHUR MOSES BUSWELL, B. A.
Instructor in Industrial Chemistry

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*Absent on leave.

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agronomy, Animal Industry, Horticulture, Agricultural and Biological Chemistry, Veterinary Science and Bacteriology, Poultry Husbandry, Domestic Science, Forestry, and Agricultural Extension. The aim of the College is to prepare young men to become farmers, teachers of agriculture and the allied sciences in the schools and colleges, investigators in the Agricultural Experiment Stations, foresters, and practical men; and to prepare young women to become teachers of domestic science and elementary domestic art and to understand thoroughly the problems arising in the administration of institutions or of a home. *Tuition is free except in the curricula of Forestry and Domestic Science.* On entering either the four year or two year school course in Agriculture a student is required to fill out a practical experience blank. Those who have not had experience in the operations common to ordinary farms are required to make themselves proficient in such lines before graduation.

The courses of instruction are organized as follows:

1. The Regular Courses:
   - The four years' general curriculum in Agronomy, Animal Industry, Horticulture, Poultry, Forestry, and Domestic Science
   - The four years' curriculum for teachers in Elementary Agriculture
   - The special courses in Agronomy, Animal Industry, Horticulture, Poultry Management, and Domestic Science
   - The two years' Teachers' Course in Domestic Science
   - The one year Teachers' Course in Agriculture
   - The two years' School Course in Agriculture
   - The short winter courses in Agronomy, Animal Industry, Horticulture, and Poultry
   - Farmers' week
2. The Extension Courses:
   - The correspondence courses
   - The lecture courses
   - The traveling schools
   - The demonstration work
   - The co-operative experiments

The College Curricula

The college curricula are designed for those who wish to follow agriculture, animal and dairy husbandry, horticulture, poultry husbandry, domestic science, chemistry relating to experiment station work, veteri-

nary science and bacteriology, or forestry as a business, or who propose to become teachers or investigators in related sciences. The instruction is arranged with a view to emphasize fundamental principles and to give the student the largest amount of technical knowledge consistent therewith. To this end the theoretical instruction is associated with practical work and observation on the farm, the dairy, in the orchard and garden, poultry plant, university woodlot, and in the various laboratories of the University; but time is not consumed in purely manual operations.

Certain studies are fundamental to all work in agricultural lines and these are included among the subjects required in the four year courses. After these fundamental subjects are completed, opportunity for election is given.

Students in agriculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. Those intending to take this course should elect a preparatory course in quantitative chemical analysis.

The following curriculum, embracing 30 credits, is the required course for four years' agricultural students. It is recommended that the subjects be taken in the order stated in the course. The elective subjects are selected with the advice of the major instructor.

A curriculum for those who intend to become teachers of elementary agriculture in the public schools is to be found following the regular curriculum.

The Four Years' Curriculum in Agronomy, Animal Industry, Horticulture and Poultry Husbandry

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5, †4	2	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 1, *6	2	Chemistry 4, †4	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Military 1, *3	1	Forestry 1	2
Physical Training *2	2-3	Military 2, *3	1
		Physical Training *2	2-3
	18 2-3		19 2-3

SOPHOMORE YEAR

Agronomy 1	2	Agronomy 4	2
Agronomy 2, *3	1	Chemistry 7	5
Animal Industry 3	2	English 2b	1
Animal Industry 4, †2	1	Horticulture 1	4
English 2a	2	Mathematics 2 and 1	5
Horticulture 2	4	Military 2, *3	1
Mathematics 4 and 2	5	Poultry Husbandry 6	2
Military 1, *3	1	Poultry Husbandry 6a, †2	1
Poultry Husbandry 1	1		21
Poultry Husbandry 1a, †2	1		
	20		

At the beginning of the Junior year each student will have to decide whether he will specialize in Agronomy or Horticulture *or* Animal Industry or Poultry Husbandry.

JUNIOR YEAR

Subject	Hours	Subject	Hours
Animal Industry 7	2	Agricultural Chemistry 3	2
Animal Industry 6, †2	1	Animal Industry 5	2
Biological Chemistry 1	5	Animal Industry 8, *3	1
Biology 3 *or* Biology 10	4	Bacteriology 1, †6	3
Farm Management 2	2	Biological Chemistry 2, †6	3
Horticulture 4	2	Biology 6 *or* Biology 11	4
Modern Language	3	Modern Language	2
	19	Elective	3
			20

SENIOR YEAR

Farm management 1	2	Biology 8	4
Thesis (minimum)	3	Thesis (minimum)	3
Elective	12	Elective	10
	17		17

Students specializing in Agronomy, Animal Industry, Horticulture, or Poultry Husbandry, are required to elect from the following list courses which bear upon their subjects.

Agronomy 6, 9, 12, 13
Animal Industry 9, 10, 11, 12, 13, 14
Bacteriology and Veterinary Science 3, 7
Biological Chemistry
Biology
Chemistry
Education
Economics
English
French
German
History
Horticulture 3, 5, 6, 7a, 7b
Mathematics
Poultry Husbandry 2, 2a, 3, 3a, 4, 5, 7, 9, 10
Physics

At graduation the student receives the degree of Bachelor of Science. Upon completion of graduate work prescribed by the University, and the presentation of a satisfactory thesis, he receives the degree of Master of Science.

Curriculum in Agriculture for Those Who Intend to Become Teachers of this Subject in the Public Schools

This course is offered in response to a call for men capable of teaching agriculture, and perhaps one or two of the sciences in high schools or academies; or capable of acting as principal and teacher of agriculture in schools of this character. In order to receive a degree 150 hours, or 30 credits, must be received. The following course as laid down covers 140 hours. The remaining 10 hours have been purposely left open for elective work in order that the student may receive as liberal a training in cultural studies as is consistent with the amount of technical work necessary. It is recommended that the electives be taken from the departments of biology, history, economics, chemistry, physics, or English.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 4 and 2	5	Mathematics 1 and 2	5
Military 1, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2-3

SOPHOMORE YEAR

Agronomy 5, †4	2	Agronomy 4	2
Biology 1	5	Animal Industry 1	2
Education 1	3	Animal Industry 2, †2	1
English 2a	2	Biology 1	5
Horticulture 2	4	Education 2	3
Mechanical Engineering 1b, *4	1 1-3	Forestry 1	2
Military 1, *3	1	Horticulture 1	4
Poultry Husbandry 1	1	Mechanical Engineering 2, *4	1 1-3
Poultry Husbandry 1a, †2	1	Military 2, *3	1
	20 1-3		21 1-3

JUNIOR YEAR

Agronomy 1	2	Agronomy 11, *3	1
Agronomy 2, *3	1	Biology 8	4
Animal Industry 3	2	Chemistry 7	5
Animal Industry 4, †2	1	Education 8	2
Education 5	3	Modern Language	2
Farm Management 2	2	Veterinary Science 6	3
Horticulture 4	2	Veterinary Science 8	1
Modern Language	3		18
Elective	3		
	19		

		SENIOR YEAR	
Animal Industry 7	2	Animal Industry 5	2
Biological Chemistry 1	5	Animal Industry 8, *3	1
Physics 4	5	Agricultural Chemistry 3	2
Veterinary Science 7	2	Bacteriology 1, †6	3
Veterinary Science 8	1	Horticulture 8	2
Elective	2	Physics 5, *5	2
		Elective	5
	17		17

The Special Courses in Agronomy, Animal Industry, Horticulture, Poultry Husbandry, and Domestic Science.

The Special Courses are designed for young men and women who cannot well spend four years in preparing themselves to become farmers but who wish to secure special training in certain agricultural subjects. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, domestic science, or general farm crops and farm management.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. If they subsequently desire to become candidates for a degree, they will be required to pass all the entrance examinations. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course

The annual expenses for courses of one year or more are the same as those for students in the four year courses. Tuition is free except in forestry and domestic science.

The Two Years' School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultry men or gardeners, but who cannot devote time to high school or college training.

The same equipment is used and the same instructors give the work as in the four years' university course, but the work is of a more ele

mentary nature. All the classes are separate and distinct from the four year classes, and in no case will college credit be allowed for work done in the school course.

There are no entrance examinations required of those who desire to enter the school course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work at the college, for which reasonable wages will be paid, or on some farm approved by the faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester	*Spring Semester*
Animal Industry (3)	Animal Industry and Dairy Work (3)
Business Arithmetic and Farm Accounts (2)	English (3)
Carpentry (*3)	Farm Practice and Laboratory Work (*3)
English (3)	Fertilizers and Farm Mechanics (3)
Farm Practice and Laboratory Work (*3)	Forge Work (*3)
Fruit Handling (3)	Fruit Growing (3)
Fruit Picking, Packing, and Laboratory Work (*3)	Orchard Practice and Laboratory Work (*3)
Poultry Husbandry (2)	Poultry (2)
Poultry Husbandry Laboratory (†2)	Poultry Husbandry Laboratory (†2)
Practical Dairying and Stock Management (†2)	Practical Dairying and Stock Management (†2)
Soils and Soil Management (3)	

SECOND YEAR

Animal Industry (3)	Animal Industry (3)
English (2)	English (2)
Farm Chemistry (3)	Farm Crops and Farm Mechanics (3)
Farm Crops and Farm Mechanics (3)	Farm Practice and Laboratory Work (*3)
Farm Practice and Laboratory Work (*3)	Forestry (2)
Fruit Growing (3)	Garden Practice and Laboratory Work (*3)
Orchard Practice and Laboratory Work (*3)	Insects (2)
Poultry (2)	Poultry Management (2)
Practical Dairying and Stock Management (†2)	Practical Dairying and Stock Management (†2)
Veterinary Science (3)	Vegetable Gardening (3)
	Veterinary Science (3)

One Year's Teachers Course

Nearly every state in this country requires that the elements of agriculture shall be taught in the public schools. Maine offers extra state aid to schools that have such a course. There is a call, at salaries one-third to one-half larger than are usually paid, for teachers who have had a training in this subject.

The graduates of the College of Agriculture are not sufficient in number to fill these places, and in order to relieve the situation "the one year course" is offered.

This course comprises a solid year of work in agriculture and closely related sciences and is designed for high school teachers, normal school teachers, and others who desire to fit themselves to teach agriculture in the secondary schools of the state but who cannot take the regular agricultural course leading to the B. S. degree. It is open to college graduates, high school teachers with at least two years' experience, and normal school graduates who have had three years' experience in teaching. A certificate is given to those completing it.

The course of study is as follows:

FALL SEMESTER

Agricultural Botany	2	Fruit Growing and Pomology	3
Agricultural Chemistry	3	Horticultural Laboratory *3	1
Agricultural Chemistry Laboratory *3	1	Manual Training *3	1
Agricultural Economics	2	Plant Propagation	3
Anatomy and Physiology of Domestic Animals	2	Poultry	2
Animal Breeding	3	Poultry Laboratory *3	1
Fertilizers	3	Soil Laboratory *3	1
		Stock Judging *3	1
		Soils	3

SPRING SEMESTER

Agricultural Engineering and Farm Management	3	Forestry	2
Agricultural Engineering *3	1	Landscape Gardening	3
Animal Feeding	3	Landscape Gardening Laboratory *3	1
Bacteriology Laboratory *3.	1	Live Stock Management *3..	1
Buttermaking *3	1	Manual Training *3	1
Dairying	3	Poultry	3
Economic Entomology	2	Poultry Laboratory *3	1
Education	2	School Gardening *3	1
Field Crops	3	Vegetable Gardening	3
Field Crops Laboratory *3..	1	Vegetable Gardening Laboratory *3	1
		Veterinary Science	3

The Short Courses in General Farming, Dairying, Horticulture, and Poultry Management

The short course in general farming, offered for the first time this year, deals especially with farm crops. Special attention is given to the potato, corn, oat, and hay crops,—the preparation of the seed bed, selection of seed, seeding, fertilization, culture, and harvesting. Such general subjects as drainage, maintenance of soil fertility, rotation of crops, control of weeds, etc., are considered. Potato, corn, and small grain judging is made a prominent feature.

The short course in dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen,

and others who desire to learn milk testing, butter making, the principles of animal nutrition and practices of feeding, breeding, judging stock, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and co-operation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort is made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring and judging, and killing and marketing. Supplementing the work of the regular instructors in the University some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of instruction the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent on request by applying to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the College for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one session is given up to problems of rural betterment, a section is arranged where domestic science for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

The Department of Agricultural Extension

This department of the College of Agriculture offers correspondence courses, lecture courses, demonstration work, coöperative experiments, and Three Day Agricultural Schools.

This work is intended to help persons directly on the farm and in the home; to aid those who desire definite instruction in practical agriculture, animal industry, domestic science, forestry, and horticulture, but who cannot take a long or regular course at the University. It supplements the teaching and experimenting of the College of Agriculture and the Experiment Station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the College or procured from the U. S. Department of Agriculture, or from the various Experiment Stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1—Farm Crops and Crop Production
Course 2—Farm Management
Course 3—Feeding and Breeding of Farm Animals and Dairying
Course 4—Poultry Keeping
Course 5—Fruit Growing
Course 6—Forestry
Course 7—Home Economics
Course 8—Elementary Agriculture
Course 9—Domestic Science
Course 10—The Business of Dairying
Course 11—Vegetable Gardening

Lecture Courses

For these lectures members of the Agricultural Faculty are sent to speak at grange meetings, farmers' institutes, and other gatherings, if the traveling expenses of the lecturer are paid by those holding the meeting.

Demonstration Work

For this work members of the Agricultural Faculty will make demonstrations, showing, as well as telling, how to solve many practical farm

problems. These demonstrations are made on the farms and in the barns of the farmer, and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing (use of Babcock tester); stock judging; corn and small grain judging and breeding; potato judging, breeding, and spraying; orchard spraying, pruning and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Co-operative Experiments

Experiments will be undertaken in coöperation with farmers along such lines as the following: the determination of the formula best suited for certain fields; the eradication of noxious weeds; the determination of the best means for increasing the hay crop. To encourage the growing of corn small lots of seed are sent to those who will grow field corn.

Experiments with corn, hay, and fertilizers have been carried on in every county in the state. During Farmers' Week exhibits are made showing the results of this experimental work; school gardening is encouraged by the distribution of seeds.

Three Day Agricultural Schools

To extend the advantages of agricultural instruction to persons actively engaged in agriculture, the Extension department will conduct a limited number of Three Day Schools in various parts of the state. Members of the Agricultural Faculty will teach in these schools.

Besides the Demonstration, Correspondence, and Lecture courses, the the College of Agriculture welcomes all kinds of correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

A free monthly publication, "Timely Helps for Farmers," treating on subjects of interest to farmers, is published by the Extension department and may be secured upon application.

Circulars giving full information upon these subjects will be sent upon request.

The Four Years' Curriculum in Domestic Science and Elementary Domestic Art

This curriculum leading to a B. S. degree prepares women to teach Domestic Science and Elementary Domestic Art in elementary, high, and normal schools, and in colleges. It gives instruction in cookery, dietetics, marketing, serving, household economics, laundry-work, sewing, and handwork. A foundation for the practical work is laid in pursuing a thorough course in chemistry, biology and physiology, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this curriculum must meet the regular college requirements.

Laboratory fees are charged to cover cost of materials used. Students of the University electing these courses are also required to pay the laboratory fees. These are as follows:

Cookery courses 1-7, each $4 a semester
Cookery courses 9-12, each $7 a semester
Cookery course 8, $10 a semester
Handwork courses $3 a semester
Household economics $1 a semester
Laundry-work $1 a semester
Practical housework $3.50 a semester
Household administration, course 33, $1 a semester

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Cookery 1	2	Cookery 2	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Modern Language	3	Modern Language	2
Sewing 13, †3	1 1-2	Sewing 14, †3	1 1-2
	19 1-2		18 1-2

SOPHOMORE YEAR

Art 25, †3	1 1-2	Art 26, †3	1 1-2
Chemistry 14, †10	5	Chemistry 7	5
Cookery 3	2	Cookery 4	2
English 2a	2	English 2b	1
Handwork 19, †3	1 1-2	Handwork 20, †3	1 1-2
Mathematics 4, and 2	5	H. Administration 30, †3	1 1-2
Modern Language	3	Modern Language	2
	20	Sanitary Science	2
			16 1-2

JUNIOR YEAR

Art 27, †3	1 1-2	Art 28, †3	1 1-2
Biol. Chemistry 1	5	Bacteriology 2	1
Cookery 5	2	Biol. Chemistry 2, †6	3
Philosophy 1	3	Cookery 6	2
Physics 4	5	Philosophy 1b	3
Sewing 15, †3	1 1-2	Physics 5, *5	2
	18	Sewing 16, †3	1 1-2
		Elective	4
			18

SENIOR YEAR

Cookery 7	2	Cookery 8, *3	1
Economics 1a	2	Education 2	3
Education 1	3	Education 8	2
Education 5	3	Handwork 22, †6	3
Handwork 21 †6	3	H. Administration 31	1
H. Administration 29 †2	1	Mech. Engineering 20	1
H. Administration 32	2	Practice Teaching 35	1
Methods 34	1	Thesis 36	2
Practice Teaching 35	1	Elective	4
	18		18

The Two Years' Course in Domestic Science and Elementary Art.

This course aims to prepare women for teachers in Domestic Science and Elementary Domestic Art. It is offered to those who find it impossible to remain at the University for a longer period. This course does not lead to a degree but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent and who have some practical knowledge of housework are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the University, courses in elementary chemistry, physics, and physiology. For information concerning fees see the four years' course.

FIRST YEAR

Art 25, †3	1 1-2	Art 26, †3	1 1-2
Biology 1	5	Bacteriology 2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Cookery 9	3	Chemistry 4, †4	2
Philosophy 11	3	Cookery 10	3
Sewing 17, †4	2	Handwork 23, †3	1 1-2
		H. Administration 30, †3	1 1-2
	18 1-2	Philo ophy 1b	3
			21 1-2

SECOND YEAR

Art 27, †3	1 1-2	Art 28, †3	1 1-2
Biol. Chemistry 1	5	Biol. Chemistry 2, †6	3
Cookery 11	3	Cookery 12	3
Education 1	3	Cookery 8, *3	1
H. Administration 33	1	Education 2	3
H. Administration 29, †2	1	Handwork 24, †3	1 1-2
Methods 34	1	H. Administration 31	1
Practice Teaching 35	1	H. Administration 32	2
Sewing 18, †4	2	Mech. Engineering 20	1
		Practice Teaching 35	1
	18 1-2	Sanitary Science	2
			20

The Forestry Curriculum

A complete undergraduate curriculum in forestry is arranged, which may serve as the basis not only of practical work in forestry, but also of a liberal education. A knowledge of the principles of forestry in its different branches is given to the student, and some practice work is done in the forest. For students of agriculture this course offers work which will give a training in the management of the farmer's woodlot.

The instruction in this department consists of lectures, recitations, laboratory, and field work. The woodland belonging to the University, together with adjacent land covered by a young forest, furnishes a field for the study of many forest problems.

The E. C. Atkins Company, of Indianapolis, Indiana, has contributed a fine display of tools manufactured by them, to the Department of Forestry. There are 54 samples in the exhibit, mounted on a background of green velvet in a glass-covered case furnished by the company. Each article is numbered and labeled, thus adding materially to the value of the exhibit for use in the class room. The case has been placed in the forestry class room in Agricultural Hall and will be of general interest to visitors.

The Department has also received two large pictures from the Baldwin Locomotive Works of Philadelphia, which show two types of logging locomotives which they manufacture.

Students who complete the curriculum are admitted to advanced standing in the graduate schools of forestry and are thus able to shorten the time required to obtain a master's degree. Students completing the curriculum have also gone directly into practical work.

There are good openings for the student to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying the expense of their University course.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 2 and 4	5	Mathematics 2 and 1	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	21 2-3		21 2-3

SOPHOMORE YEAR

Agronomy 1	2	Biology 8	4
Agronomy 2, *3	1	Biology 17	4
Biology 17	4	Biology 11	4
Biology 10	4	Civil Engineering 2b, 2c	1 2-3
Civil Engineering 1a, 2a	2 2-3	English 2b	1
English 2a	2	Military 1, *3	1
Military 1, *3	1	Modern Language	2
Modern Language 3	3		17 2-3
	19 2-3		

JUNIOR YEAR

Civil Engineering 4b, 4c, *6	2	Biology 16	3
Forestry 6	2	Civil Engineering 9a	1
Forestry 8, *6	2	Civil Engineering 9b	2
Geology 5	3	Forestry 7	2
Modern Language	3	Forestry 9, *6	2
Electives	5	Modern Language	2
	17	Electives	6
			18

SENIOR YEAR

Biology 9	2	Forestry 11, *3	1
Forestry 10, *6	2	Forestry 13	1
Forestry 12	1	Forestry 14, †10	5
Electives	12	Electives	10
	17		17

ELECTIVES

Animal Industry 3	2	Animal Industry 5	2
Animal Industry 4, †2	1	Bacteriology 2	1
Bacteriology 3, †6	2	Bacteriology 4	
Biology 7	2	Biology 8	3
Biology 2, †4	2	Biology 5	5
Biology 12		Biology 12	
Chemistry 7	5	Chemistry 3, †4	2
Chemistry 14, †8 or †10	4 or 5	Chemistry 13, †3	1 1-2
Civil Engineering 3b	1	Civil Engineering 3a	2
Civil Engineering 4b	1	Civil Engineering 4a	1
Civil Engineering 4c	1	Civil Engineering 8	2
Drawing 10, *6	2	English	
English		French	
French		German	
German		History	
History		Mathematics	
Mathematics		Mech. Engineering 2, *4	1 1-3
Mech. Engineering 1b, *4	1 1-3	Philosophy 4	2
Philosophy 5a	2	Philosophy 5a	2
Physics 12	5	Physics 5, *5	2
Spanish		Spanish	
		Veterinary Science †6	3

At graduation the student receives the degree of Bachelor of Science. Upon completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

DEPARTMENTS OF INSTRUCTION

NOTES—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

AGRONOMY

PROFESSOR BELL.

1. SOILS.—Lectures and recitations dealing with the following: Fundamental principles underlying the science of agriculture, topographic divisions of America, soil origin, soil types, and their distribution; the structure of various types of soils; soil moisture, soil heat; soil aeration; principles of soil tillage. Considerable attention is given to the consideration of the relation of humus to soils since it is essential to good physical condition in soil and to its capacity for holding water. Attention will be given to the important question of reclaiming worn-out soils. *Two hours a week.* Fall semester.

2. SOIL PHYSICS.—This course will be comprised of laboratory exercises establishing principles outlined in the lectures in the preceding course. It will deal especially with the subject of the maintenance of fertility of the soil by judicious cultivation. Exercises will include the determination of specific gravity, water holding capacity, and capillary power of the various types of soils. The mechanical analysis of the various types of soil will be made. * *Three hours a week.* Fall semester.

4. SOIL FERTILITY.—This course deals with the question of conserving the elements of plant food in the soil, as well as adding to the amount of available plant food. Special attention is given to crop rota-

tion as a means of maintaining and increasing the fertility of the soil. A careful study of the following important subjects is made: The composition and use of barnyard manures; the nature, and special value of the prominent commercial fertilizers offered on the market, scientific compounding and home mixing of fertilizers suitable to various crops. The principles of physics, basic to soil drainage will receive due consideration. *Two hours a week.* Spring semester.

5. Crop Identification and Marketing.—Lectures will be given on the distinguishing characteristics of the several crops raised on the farm, their adaptability to various soils and climates, methods of preparation of the seed bed, seeding, cultivation, and harvesting. This course will also include the identification of weeds, both in plants and by seeds; with general instructions for their eradication. A definite study will be made of the following: (1) methods of preparation of the farm crops for market; (2) commercial grades of grain; (3) means of handling the grain crops of the country; (4) the interpretation of crop reports and markets. The students will be required to mount a collection of common weeds and grain crops and grasses. † *Four hours a week.* Fall semester.

6. Laboratory Farm Crop Breeding.—In this course will be discussed the laws of heredity and breeding as applied to the improvement of crops grown upon the farm. Definite methods of the breeding by selection of potatoes, oats, wheat, barley, and corn will be outlined. Careful study will be made of variation and correlation of characters in the common crops outlined above. Hybridization of cereals and their selection according to Mendelian principles will receive special attention. Required of students specializing in Agronomy. Elective to all other Agricultural students. † *Four hours a week.* Fall semester.

9. Agricultural Seminar.—In this seminar work in farm crops and soils, lecture material will be classified and presented by members of the class. Current agricultural literature both of experiment station reports, bulletins, and agricultural magazines will be cited with references and abstracts of important articles will be called for. † *Two hours a week.* Spring semester.

10. School Gardening.—This course is especially designed for those taking the one year teachers' course in agriculture. It will deal with the

use of the school garden as a supplement to the teaching of agriculture in secondary schools; an outline of the material that should be found therein and the use of this material for laboratory purposes; the laying out of the school garden, and the general management thereof. * *Three hours a week.* Spring semester.

11. Thesis.—Those specializing in agronomy will be required to prepare a thesis on some line of this work, the subject of the thesis to be chosen by the student under the direction of the head of the department. The subject for this study should be chosen and definite assignment made before the close of the junior year. Six hours minimum credit; *three hours* fall semester, and *three hours* spring semester of the senior year.

ANIMAL INDUSTRY

Professor Campbell; Mr. Dice

1. Animal Breeding.—A study of the market and breed types of dairy cattle, beef cattle and sheep; their history, development, breed characteristics and economic values. The work is given by lectures and text-books. *Two hours a week.* Spring semester.

2. Live Stock Judging.—Practice in the use of score cards and judging, handling and management of dairy cattle, beef cattle and sheep. This course is taken in conjunction with Animal Industry 1. † *Two hours a week.* Spring semester.

3. Animal Breeding.—A study of the market and breed types of swine and horses, their history, development, breed characteristics and economic values. Lectures and recitations on the principles of breeding. *Two hours a week.* Fall semester.

4. Live Stock Judging.—Practice in the use of score cards, and judging, handling and management of swine and horses. This course is taken in conjunction with Animal Industry 3. † *Two hours a week.* Fall semester.

5. Animal Feeding.—Food requirements of different kinds of animals; composition of foods and the nutrients furnished by them; feeding formulas; calculating rations; valuation of foods; pasturing, soiling and methods of feeding. *Two hours a week.* Spring semester.

6. Dairying.—A study of the Babcock test; use of lactometer, determination of acidity and adulterations. Given by lectures, text-books, and practice in dairy laboratory. † *Two hours a week.* Fall semester.

7. Dairying.—Lectures and recitations upon the composition and formation of milk; its production and aeration, pasteurization, separation, manufacture into butter, and marketing. *Two hours a week.* Fall semester.

8. Laboratory Dairying.—Practice in handling and testing milk and cream, for butter fat, acidity, and solids; ripening cream; making butter and operating dairy machinery. This must be in conjunction with or preceded by Animal Industry 6 and 7. * *Three hours a week.* Spring semester.

9. Advanced Animal Feeding.—This course is devoted to the methods and practices of successful feeders in the production of milk, meat, and the rearing of horses. Elective for those who have completed Animal Industry 5. *Two hours a week.* Fall semster.

10. Advanced Dairying.—This course is intended for those who desire to follow some line of dairying. It will deal with such problems as the handling of milk for the city trade, certified milk plants, and those problems pertaining to the creamery. Elective for those who have completed Animal Industry 6, 7, and 8. *Two hours a week.* Fall semester.

11. Advanced Animal Breeding.—Lectures upon the formation of flocks, herds, etc.; a study of pedigrees, records, and the practices of successful breeders. Elective for those who have completed Animal Industry 1 to 4, inclusive. *Two hours a week.* Spring semester.

12. Advanced Live Stock Judging.—This course is intended for those who desire more practice in the judging of live stock than is given in Animal Industry 2 and Animal Industry 4. It will include score card work and comparative judging. Elective for those who have completed Animal Industry 1 to 4, inclusive. † *Two hours a week.* Spring semester.

13. Cheese Making.—Lectures and recitations upon the manufacturing and curing of Cheddar and other brands of cheese. Elective for those who have completed Animal Industry 6, 7, and 8. *Two hours a week.* Fall semester.

14. Cheese Making.—Practice in the laboratory. Taken in conjunction with Animal Industry 13. † *Four hours a week.* Fall semester.

BACTERIOLOGY AND VETERINARY SCIENCE

Professor Russell

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. This course may be taken alone or in connection with Bacteriology 2. † *Six hours a week.* Spring seemster.

2. Bacteriology.—A lecture course open to all students. Should be elected by students taking Bacteriology 1 as well as by students who cannot take a laboratory course. Subjects considered will include history of bacteriology, classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products, the relation of bacteria to health and disease, immunity. *One hour a week.* Spring semester.

3. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogeric bacteria. Bacteriology 1 is a prerequisite. † *Six hours a week.* Fall semester.

4. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Only open to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

5. Veterinary Science.—A laboratory course in normal animal histology. This course is designed for students preparing for the study of human or veterinary medicine and for agricultural students specializing in animal industry. The work will consist of a microscopical study of the anatomical elements of the animal body and their various combinations in tissues and organs. Books of reference will be studied in connection with the laboratory work. † *Four hours a week.* Fall semester.

6. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals and their treatment to preserve and restore health. *Three hours a week.* Spring semester.

7. Veterinary Science.—A continuation of Veterinary Science 2. *Two hours a week.* Fall semester.

8. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.* Fall and spring semester.

9. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.* Fall semester.

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Merrill

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source and assimilation of plant food; the composition of the animal body and of food materials; the chemical changes involved in the digestion and assimilation of food; and the chemical processes and methods of investigation by which these subjects are studied. *Five hours a week.* Fall semester.

2. Laboratory Biological Chemistry.—A study of the proteids, fats, and carbohydrates; the digestive enzymes; blood and other tissues of the animal body; bile, milk, and other secretions. A continuation of the preceding course. † *Six hours a week.* Spring semester.

3. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; and the chemistry of milk and other dairy products. *Two hours a week.* Spring semester.

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter and other dairy products. The course is designed for students desiring to take up experiment station work. Open to students who have completed the courses Chemistry 1, 2, 3, 4, 7, 8, 14, 15, 16. † *Ten hours a week.* Spring semester.

5. Geology.—A study of the earth's history and development, with especial attention to structural and physiographical geology. *Three hours a week.* Fall semester.

6. Economic Geology.—An elementary course in applied geology. The course will include a general survey of our mineral resources; and a study of rocks and their uses as building stone, as road material, and as sources of lime and cement. *Two hours a week.* Fall semester.

DOMESTIC SCIENCE

PROFESSOR COMSTOCK

Cookery

1. COOKERY.—Lectures, recitations and laboratory practice. This course provides instruction in the general principles controlling the preparation of food with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Serving, taken in conjunction with the course in cookery, deals with the arrangement of a dining room, table equipment, and rules for table service. Practical serving of at least one meal. Lecture, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

2. COOKERY.—Continuation of course 1. Marketing is included in the work of this semester. Lectures and recitations on purchasing and care of general supplies: vegetables, fruits, meats, poultry, and fish. Dairy products considered; adulteration and preservation of food. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

3. COOKERY.—Canning and preserving occupy six weeks of this semester, the remainder of the time is given to general cookery. Accounts are taken in this semester. The work includes household and institutional accounts; inventories; requisitions; making of bills; payment by check; vouchers; contracts. Open to students who have taken courses 1 and 2. Lecture, *one hour a week;* laboratory, † *two hours.* Fall semester.

4. COOKERY.—Continuation of course 3. Open to students who have completed courses 1, 2, and 3. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

5. DIET FOR CHILDREN.—A thorough review of the principles of cookery. Practical tests given in which speed and dexterity are noted. A modification of the adults diet as adapted to children is considered. Open to students who have taken courses 1, 2, 3, and 4. Recitation, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

6. DIET FOR INVALIDS.—Special consideration of food for the sick and convalescent. Same requirements as for course 5. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

7. Cookery.—A return to general cookery is made through work in large quantities, and the preparing and serving of meals. Demonstration work is another feature. Open to students who have taken courses 1, 2, 3, and 4. Lecture, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

8. Fancy Cookery and Field Work.—A course which gives instruction in serving a formal dinner, fancy cookery including garnishing. Field work consists in visiting a model dairy, wholesale grocery, meat market, flour mill, canning factory, etc. Required work in the last semester of the two courses offered. * *Three hours a week.* Spring semester.

9. Cookery.—Designed for those taking the two years teachers' course. Includes instruction in general principles of cookery and study of typical foods. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

10. Cookery.—Continuation of course 9. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

11. Advanced Cookery.—Canning, preserving, and elaboration of the principles of cookery as taught in courses 9 and 10. Special diet for children given the last part of the semester. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

12. Diet for Invalids.—Continuation of course 11 and diet for invalids. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

Sewing

13. Hand Sewing.—This course includes the fundamental principles of hand sewing taught in connection with the making of towels, napkins, skirts, etc. † *Three hours a week.* Fall semester.

14. Hand Sewing.—Making of undergarments by hand after a pattern. † *Three hours a week.* Spring semester.

15. Machine Sewing.—Drafting of patterns for undergarments and an unlined dress. † *Three hours a week.* Fall semester.

16. Machine Sewing.—Continuation of course 15. † *Three hours a week.* Spring semester.

17. Hand Sewing.—This course presents the essentials of courses 13 and 14 in a condensed form. † *Four hours a week.* Fall semester.

18. Machine Sewing.—This course presents the essentials of courses 15 and 16 in a condensed form. † *Four hours a week.* Fall semester.

Handwork

19. Handwork.—This consists of braiding, knotting, netting, knitting, crocheting, weaving, caning, and basketry. † *Three hours a week.* Fall semester.

20. Handwork.—Continuation of course 1. † *Three hours a week.* Spring semester.

21. Advanced Handwork.—Basketry and weaving. † *Six hours a week.* Fall semester.

22. Advanced Handwork.—Continuation of course 21. † *Six hours a week.* Spring semester.

23. Handwork.—Offered to students taking the two years course. It includes all the principles involved in course 1. † *Three hours a week.* Spring semester.

24. Handwork.—Continuation of course 23. † *Three hours a week* for ten weeks. Spring semester.

Art

25. Drawing.—This course consists of a study in line, light and dark, and color. † *Three hours a week.* Fall semester.

26. Design.—Emphasis this semester in art work is placed upon design. The designs made are used in basketry and weaving. † *Three hours a week.* Spring semester.

27. Construction.—This course consists of lectures and the making of a lower floor plan of a modern house. The details of window, door,

wall, and fire-place construction, chimneys, pantry, etc., are carefully considered. Special problem of planning Domestic Science kitchens. † *Three hours a week.* Fall semester.

28. Color Schemes.—Lectures on house furnishings and a practical problem of making color scheme using actual materials for the house planned in course 3. † *Three hours a week.* Spring semester.

Household Administration

29. Household Economics.—Lectures, recitations and practice. Principles of housework examined. Methods studied and practical application made. † *Two hours a week.* Fall semester.

30. Laundry Work.—Principles and processes included in laundry work are studied. Equipment for the home and school, care of equipment; processes of laundering; sorting and soaking clothes; removal of stains; methods of handling cotton, linen, silk, woollen; special points considered with colored materials; rinsing, bluing, making soap, etc. † *Three hours a week.* Spring semester.

31. Home Nursing.—Considers the sick room and its appointments. Care of patient. Bandages, kind and technique. Contagious diseases; burns, frost-bites, etc. *One hour a week.* Spring semester.

32. Practical Housework.—This course affords opportunity for a student to show practically her power in managing a household and serving luncheons to twelve or more people in a specified time and with limited means. *Time to be arranged.* Counts as two hours a week one semester. Senior year.

33. Marketing, Serving, and Accounts.—Same general plan followed as outlined in cookery 1, 2, and 3. Required of two-year students. *One hour a week.* Fall semester.

34. Methods.—This course investigates the methods applicable to teaching Domestic Science and Domestic Art in the schools. Effort is made to discover the means whereby a wholesome atmosphere is secured in the school room and how the self-activity and self-direction of pupils may be fostered. Courses of study are outlined. *One hour a week.* Fall semester.

35. Practice Teaching.—Practice teaching is required of students in the senior year. This teaching is done under supervision. Time extends over twenty weeks at least of the year. † *Two hours a week,* for each semester.

36. Thesis.—A thesis on a subject relating to Domestic Science and showing independent work is required of all students taking the four years course. Equivalent to *two hours a week.* Spring semester.

Summer Term

1. Cookery.—This course will include the principles and practice of cookery, including study of foods and the preparation and serving of meals.

2. Household Administration.—Courses in laundry-work, household economics, also marketing, serving, and accounts.

FARM MANAGEMENT AND AGRICULTURAL ENGINEERING

Professor Simmons

1. Farm Management and Rural Architecture.—(a) Farm management. A study of the various types of farming, with comparison of investment and returns for each. Grain, stock, hay, fruit, and vegetable farming will be considered. A study of the conditions under which extensive, intensive, and mixed systems of farming prosper or fail; laying out of fields and rotation of crops; markets, and marketing; farm accounts, estimates of cost of different farming operations, planning of season's work; and the management of men and teams will be studied. Farm plans will be outlined to suit various conditions.

(b) Rural architecture. The planning, designing, location, and construction of farm buildings including water systems. sewage, concrete construction, etc. † *Four hours a week.* Fall semester of senior year.

2. Agricultural Engineering and Farm Mechanics.—(a) Farm surveying and drainage. The plotting of farms and the measurement of land; leveling for drains, a study of the importance of drainage, the different forms of drains, estimating the investment and returns from a system of drainage, cost of tile, etc.; the making of roads, road material, etc.

(b) Farm mechanics and farm machinery. A study of the simpler laws of mechanics used in operating farm implements; the principles of draft, the handling in the field, the adaptability of machines for use for various soils, conditions, and seasons, the taking apart and the putting together of the different classes of farm implements in possession of the department; the relative merits of wind, gasoline, denatured alcohol, steam, and electricity as sources of power on the farm. † *Four hours a week.* Fall semester.

3. History and Economics of Agriculture.—(a) History of agriculture. A history of agriculture from the earliest times, including that of the Jews, Egyptians, and Romans, to the present day; the beginning of British agriculture, and the development of modern agriculture with especial reference to that of England, Germany, France, and other foreign countries; the agriculture of the United States, its influence on social conditions, its relation to the state and nation; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the development of plant and animal life; the evolution of farm machinery and progress in agricultural education. Lectures supplemented by illustrative material and lantern slides.

(b) Economics. The factors of agricultural production, rent of farm land, estimating the value of farm land and equipment; the law of diminishing returns from the land; system of distribution; co-operative organizations; a study of life in the rural communities; schools, and rural organizations in general. Elective. *Two hours a week.* Spring semester.

4. Farm Accounts.—(a) Farm mathematics. Instruction in this subject consists of the application of its principles to all kinds of farm problems where measurements of material, extension, capacity, etc., are required. The student is prepared also to handle with ease the mathematics of the technical courses in agriculture.

(b) Farm accounts and records. A system of records of the various operations on the farm, such as records of team labor, milk production in the dairy, labor expended on field, crop yields, etc ; a system of accounts sufficient to provide for the receipts and expenditures on the farm.

FORESTRY

Professor Briscoe

[Note.—The courses in forest botany and forest zoölogy are listed under biology.]

1. General Forestry.—The importance and scope of the subject; forest as a soil-former and soil-improver; relation of forest to health of a community; relation to the State; esthetic value; influence on floods; importance of forest in irrigation; geographical distribution of forests. The course is recommended to the student in economics. Open to all students. *Two hours a week.* Spring semester.

3. Forest Mapping and Computing.—Making type and topographical maps using date of valuation surveys; practical work in computing aneroid readings for altitude; timber estimates from valuation surveys. Elective for Seniors. *Time to be arranged.* Spring semester.

4. Forest History.—The rise and development of forestry in European countries, the United States and other countries. Text-book, History of Forestry, by B. E. Fernow. *Two hours a week.* First-half of fall semester.

6. Silviculture.—A study of the facts which concern forest growth in the relation of the tree to external influences; characteristics of the forest, and of the forest regions of the United States; systems of reproducing forests naturally, thinnings and improvement cuttings. To be taken in connection with course 8. Open to those who have taken Biology 10 and 11. *Two hours a week.* Fall semester.

7. Silviculture.—A continuation of course 6. To be taken in connection with course 9. *Two hours a week.* Spring semester.

8. Silviculture, Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 to 2000 acres of forest land in the vicinity of the University. A report accompanies the map describing the condition of the tract and type of forest growth. Open to students in Forestry who have had Drawing 1 and 2. **Six hours a week.* Fall semester.

9. Silviculture., Field Work.—A continuation of course 8. It includes practice in thinning and work in planting; practical test of

germinating quality of tree seeds and a study of seedlings. The student is required to make a planting plan for about 100 acres of land and prepare a map of the tract. This course should be preceded by courses 6 and 7. **Six hours a week.* Spring semester.

10. Forest Measurements.—Practical instruction in the woods and in the office. Some recitations.

(1). *Woods Work.*—The use of various hypsometers in ascertaining the height of standing trees; determining the contents of felled and standing trees and the volume of stands; study and use of American log scales; consideration of the methods of measurement used in the United States; study of the rate of growth of trees in diameter, height and volume.

(2) *Office Work.*—Computing the data obtained in the woods; calculating the contents of logs in cubic feet, and the contents of trees and stands in cubic feet, cords and board feet; use of graphic methods in determining the average rate of growth in diameter, height and volume; construction of tables of rate growth, volume and yield. **Six hours a week.* Fall semester.

11. Forest Measurements.—A continuation of course 10. **Six hours a week.* First half of spring semester.

12. Lumbering.—The industry considered from an economic standpoint; an account of the methods of lumbering in the different parts of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and prepare a written report on the operations of lumbering in that locality. Fall semester. Two-fifths credit is allowed for the time spent in the lumber camp and in preparing the report. Open to students taking forestry as a major subject. *Two hours a week.* First half of fall semester.

13. Forest Management.—Financial and economic considerations; the normal forest; principles and preparation of working plans. Open to those who have taken courses 6, 7, 8, 9, 10, and 11. *Two hours a week.* First half of the spring semester.

14. Thesis Work.—The preparation of a thesis. *Throughout the senior year as arranged.*

HORTICULTURE

PROFESSOR GARDNER; MR. PALMER

Courses one, two and four are required of all students in the four years' course in Agriculture. Courses three and five to ten are elective and open to students who have had sufficient preparation to do the work.

1. PRINCIPLES OF FRUIT GROWING.—A study of orchard sites and soils, and methods of setting, cultivating, fertilizing, pruning and spraying. *Two hours a week* in classroom and † *four hours a week* in the laboratory. Spring semester.

2. FRUIT HANDLING.—A study of methods of picking, grading, packing, storing, and marketing fruit. The laboratory work of this course will acquaint the student with the more important varieties of fruit in this state. *Three hours a week* in classroom and † *two hours a week* in the laboratory. Fall semester.

3. SYSTEMATIC POMOLOGY.—A systematic study of the types and varieties of the leading groups of fruits, their evolution and adaptation to environment. Open to those who have taken courses 1 and 2. *Two hours a week* in classroom and † *two hours a week* in the laboratory. Fall semester.

4. VEGETABLE GARDENING.—A study of the principles of vegetable gardening, accompanied by practice in the actual growing of garden plants. *Two hours a week.* Fall semester.

5. GREENHOUSE MANAGEMENT.—A study of the different greenhouse crops, supplemented by practice in the regular greenhouse operations. Open to juniors and seniors. *One hour a week* in classroom and † *two hours* in the greenhouse. Fall semester.

6. GREENHOUSE MANAGEMENT AND CONSTRUCTION.—A continuation of course 5 and including a study of the principles of greenhouse construction and heating. Open to juniors and seniors. *One hour a week* in classroom and † *two hours* in the greenhouse. Spring semester.

7a. PLANT BREEDING.—A study of variation, its causes and laws, and heredity. Open to seniors. *Two hours a week.* Fall semester.

7b. PLANT BREEDING.—A study of breeding systems and practical breeding problems. A continuation of course 7a and must be preceded by it. *Two hours a week.* Spring semester.

8. LANDSCAPE GARDENING.—A study of the principles of landscape

art and of the materials used in making landscape pictures. Special attention given to the improvement of the home grounds. Open to seniors. *Two hours a week.* Spring semester.

9. General Horticulture.—An introductory course designed to cover the entire field of horticulture in a general way. Intended for students who desire a general knowledge of the subject. Elective and open to all students of the University. *Three hours a week.* Fall semester.

10. Horticultural Experimentation.—Original work for those desiring to become teachers and investigators. Open to seniors and graduate students. *Time to be arranged.*

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 196.

PHYSICAL TRAINING

The courses in this department are described on page 197.

POULTRY HUSBANDRY

Professor Brown

Courses 1, 1a, 6, and 6a are required of all four year agricultural students.

1. Breeds and Breeding.—A study of types and breeds of market and fancy poultry; their history, development, breed characteristics, economic and fancy values, principles of breeding, mating, etc. *One hour a week.* Fall semester.

1a. Laboratory Practice.—The judging and scoring of the various breeds and varieties of poultry, the selection, washing, and fitting of birds for exhibition. To be taken with course 1. † *Two hours a week.* Fall semester.

2. Poultry Keeping.—Considered as a business, as an investment, as an employment; its history, successes, failures, and possibilities. *One hour a week.* Fall semester.

2a. Laboratory Practice.—The planning and laying out of poultry plants, houses, and fixtures suitable for specialization on a large scale. *Two hours a week.* Fall semester.

3. Poultry Management.—A study of feeds and feeding, egg production, incubation, brooding, housing, rearing, and feeding of young stock, selection, crate feeding. Ducks and duck culture. *Two hours a week.* Fall semester.

3a. Laboratory Practice.—The setting up and operating of incubators and brooders, the feeding of young chicks, and the caponizing, growing, fattening, killing, dressing, and preparing of chickens for market. To be taken with course 3. *Two hours a week.* Fall semester.

4. Markets and Marketing.—A consideration of the requirements of the best markets for poultry produce in America, possible improvements, the commission business, cold storage, coöperation. *Two hours a week.* Fall semester.

5. Poultry Literature.—An advanced course in the study of bulletins and reports of the Experiment Stations in this and other countries, with especial attention to the work of the Maine Experiment Station, poultry papers, text-books, etc. *Two hours a week.* Fall semester.

6. Farm Poultry.—A study of poultry keeping on the farm, housing, feeding, egg production, hatching, rearing, marketing poultry products. Ducks, geese, and turkeys. *Two hours a week.* Spring semester.

6a. Laboratory Practice.—The planning and building of poultry houses and poultry appliances suitable for the farm; practice in the mixing of feeds and in the selection of breeding stock. To be taken with course 6. † *Two hours a week.* Spring semester.

7. Insects and Diseases.—An advanced course in the recognition of, treatment for, and remedies for the various insects and diseases affecting poultry. *One hour a week.* Spring semester.

8. Original Research.—Individual work which may be entered upon by either graduate or undergraduate students. Many opportunities are offered in the field of research in poultry from the standpoint of biology, chemistry, and physics. The number of *hours a week* to be determined at time of registration. Fall or spring semester.

9. Incubation.—Principles of incubation; history of artificial incubation; Chinese and Egyptian methods; modern methods; the mammoth incubator. *Two hours a week.* Spring semester.

10. Advanced Breeds and Breeding.—An advanced course in the study of the principles of breeding as applied to the breeding of poultry; systems of breeding, etc. *One hour a week.* Spring semester.

THE COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

ROBERT JUDSON ALEY, PH. D., LL. D.
President of the University

JAMES NORRIS HART, C. E., M. S., Sc. D.
Dean of the University, and Professor of Mathematics and Astronomy

HAROLD SHERBURNE BOARDMAN, C. E.
Dean and Professor of Civil Engineering

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry

JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*

GILMAN ARTHUR DREW, PH. D. *Professor of Biology*

RALPH KNEELAND JONES, B. S. *Librarian*

JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages

ARTHUR CRAWFORD JEWETT, B. S.
Professor of Mechanical Engineering

WALTER KIERSTED GANONG, B. Sc.
Professor of Electrical Engineering

ROBERT JAMES SPRAGUE, PH. D.
Professor of Economics and Sociology

CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing

CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*

GUY ANDREW THOMPSON, M. A.
Professor of English Literature

WINDSOR PRATT DAGGETT, PH. B. *Professor of Public Speaking*
CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics
EDGAR RAMEY WINGARD, M. S.
Director of Physical Culture and Athletics
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Botany*
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
WALTER MOLBRAY CURTIS, S. B.
Assistant Professor of Mechanical Engineering
*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
LEON ELMER WOODMAN, PH. D. *Assistant Professor of Physics*
ARCHER LEWIS GROVER, B. S. *Assistant Professor of Drawing*
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
PAUL LEONARD BEAN, B. S.
Assistant Professor of Civil Engineering
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*
WALTER EVERETT PRINCE, M. A. *Instructor in English*
CHARLES JENKINS CARTER *Instructor in the Machine Shop*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
WALTER ELWOOD FARNHAM *Instructor in Drawing*
ROBERT RUTHERFORD DRUMMOND, PH. D.
Instructor in German
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMUND WILBUR, B. S. *Instructor in Mathematics*
ERNEST CONANT CHESWELL
Instructor in Engineering Laboratory Practice
ALBERT THEODORE CHILDS, B. S., E. E.
Instructor in Electrical Engineering
ALICE MIDDLETON BORING, PH. D. *Instructor in Zoölogy*

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* Absent on leave.

ERNEST CLAUDE DREW, B. S. *Instructor in Physics*
JULIUS ERNEST KAULFUSS, B. S. *Instructor in Civil Engineering*
HAROLD MERTON ROYAL, B. S. *Instructor in Physics*
VICTOR ALVIN KETCHAM, B. A., LL. B. *Instructor in English*
LLOYD MEEKS BURGHART, B. A. *Instructor in Chemistry*
ARTHUR MOSES BUSWELL, B. A. *Instructor in Industrial Chemistry*
HENRY HERBERT JORDAN, B. S. *Tutor in Civil Engineering*
JOHN NEAL PHILBROOK, B. S. *Tutor in Civil Engineering*

The executive committee of the Faculty of Instruction of the College of Technology is given power to arrange courses, act upon petitions, and transact general business relating to the technical time of the College of Technology. The regular meetings of this body occur on the Thursday preceding the general faculty meeting at 4.30 P. M.

This committee is composed of Dean Boardman, Chairman; Professor Ganong, Secretary; Dean Hart, Ex-Officio; and members of the departments of Chemistry, Civil Engineering, Mechanical Engineering, Electrical Engineering, and Mechanics and Drawing.

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, and in various branches of engineering. The number of credits required for graduation in this college is thirty. In such technical courses it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the courses described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

The Chemical Curriculum
The Civil Engineering Curriculum
The Mechanical Engineering Curriculum
The Electrical Engineering Curriculum
The Chemical Engineering Curriculum

At graduation in any of these curricula the student receives the degree of Bachelor of Science. The diploma indicates which curriculum has been completed.

The Chemical Curriculum

This curriculum is designed for those who plan to become professional chemists and analysts or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment station.

Lectures and recitations are closely associated with practical work in the laboratories.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1 *6	2	Drawing 2 *6	2
English 1a and 3	4	English 1b and 4	3
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 2 and 4	5	Mathematics 2 and 6a	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2-3

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
Chemistry 9, †4	2	Chemistry 7, 3 and †4	5
English 2a	2	English 2b	1
Mathematics 22a	2	Mathematics 22b	2
Modern Language	3	Modern Language	2
Military 1, *3	1	Military 1, *3	1
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	20		21

JUNIOR YEAR

Biological Chemistry 1	5	Agricultural Chemistry 4, †10	5
Chemistry 8	3	Bacteriology 1 †6	3
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 29a	2	Chemistry 32b	2
Chemistry 18, †8	4	Modern Language	2
Modern Language	3	Elective	3
	20		18

SENIOR YEAR

Chemistry 12, †6	3	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 24a	2	Chemistry 13, †3	1 1-2
Chemistry 19, †8	4	Chemistry 29b	2
Geology 6 or Chemistry 33	2	Chemistry 28, †2	1
		Chemistry 25, †4	2
Elective	3	Elective	3 1-2
	17		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college course to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The attention of the student is directed to the fact that the scope of civil engineering is so broad that he may never expect to become expert in all of its branches, and that on the completion of his course he should obtain employment in that branch for which he seems best adapted.

It is impressed upon his mind that the granting of his bachelor's degree does not create him an engineer. It simply indicates that he has received the technical mental training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice, and with the standard engineering literature. During each year it is the practice

to have several lectures by engineers from other institutions and from the engineering world. These lectures tend to increase the interest of the student, and to bring him in touch with men outside of his institution.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, instrument rooms, and a filing and reference room, and is well equipped with apparatus.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. In the spring semester of the third year the student is required to choose between two optional lines of study. Option 1 consists of work in Hydraulic Engineering, while Option 2 consists of work in Railroad Engineering. The time devoted to each option is the same. Owing to the available facilities of the department not more than sixty per cent of the number of students in a class are allowed to select either option. A written statement is required from each student before the close of the fall semester giving his reasons for his selection. The head of the department reserves the right to make the final division.

The following subjects constitute the regular four years' curriculum. Certain general subjects which are given as requirements, may, on presentation of satisfactory reasons to the head of the department, be omitted and others substituted.

REQUIREMENTS FOR GRADUATION

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 2, 4	5	Mathematics 2, 6a	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2 3

SOPHOMORE YEAR

Civil Engineering 1a, 2a	2 2-3	Civil Engineering 2b, 2c	1 2-3
Drawing 3, *6	2	Civil Engineering 3a, 4a	3
English 2a	2	Drawing 4, 6	2
Mathematics 6b, 7	5	English 2b	1
Military 1, *3	1	Mathematics 8	5
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	20 2-3	Physics 5, *5	2
			20 2-3

JUNIOR YEAR

Civil Engineering 3b	1	Civil Engineering 6, *6	2
Civil Engineering 4b, 4c, *6	2	Civil Engineering 9a	1
Civil Engineering 5	2	Civil Engineering *8 or Civil Engineering 19	2
Economics 1a	2	Civil Engineering 10	3
Geology 6	2	Civil Engineering 21	2
Mechanics 5	5	*Civil Engineering 9b	2
Mathematics 10	3	Economics 2a	2
Physics 19	1	Mechanics 6	5
Physics 9	1		
	19		19

SENIOR YEAR

Civil Engineering 11, †4	2	Civil Engineering 13a	3
Civil Engineering 12	3	Civil Engineering 13b	2
Civil Engineering 20	2	Civil Engineering 15, †6	3
Civil Engineering 14, †12	6	Civil Engineering 17 and Electrical Engineering 12b or Civil Engineering 24 and 25b	4
Civil Engineering 16 or Civil Engineering 25a	2		
History 5	2		
	17	Civil Engineering 26 and Mechanical Engineering 25, †4	2
		Economics 6	3
			17

* Taken after Commencement.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

The Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all works involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power and equipment of railways, and similar work.

The Mechanical Engineering Curriculum is arranged to fit men as well as possible in four years time to enter any of these lines of work. It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught mainly by recitation based upon a carefully chosen text, which is supplemented or brought down to date where necessary, by explanation or illustrative examples on the part of the instructor. Numerous problems are assigned for work outside the classroom to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation and testing of apparatus by direct contact with it. In the drawing rooms application of theories to work in design is taught together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice in the

electrical laboratory. Sufficient time is devoted to recitation and field work in surveying to give familiarity with instruments and methods. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

Of the one hundred and fifty term hours required for graduation thirty-three are devoted to instruction in English Composition and Literature, Modern Language, Economics, Business Law, and History. Opportunity to take additional work along general lines is offered and recommended to those who can readily carry it.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 2 and 4	5	Mathematics 2 and 6a	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2-3

Sophomore Year

Drawing 3, *6	2	Drawing 4, *6	2
English 2a	2	English 2b	1
Mathematics 6b and 7	5	Mathematics 8	5
Mechanical Engineering 1a, *6	2	Mechanical Engineering 2, *4	1 1-3
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	20	Physics 2	3
		Physics 5, *5	2
			20 1-3

JUNIOR YEAR

Mechanical Engineering 24..	1	Mechanical Engineering 5a, *6	2
Mechanical Engineering 5a, *6	2	Mechanical Engineering 8...	3
Mechanical Engineering 9...	2	Mechanical Engineering 10..	2
Mechanical Engineering 3, *4	1 1-3	Mechanical Engineering 15a, †2 and lectures	3
Mechanics 5	5	Mechanical Engineering 19, *4	1 1-3
Physics 9, *5	2	Mechanics 6	5
Economics 1a	2	Economics 2a	2
Elective	3		
	18 1-3		18 1-3

SENIOR YEAR

Mechanical Engineering 11..	3	Mechanical Engineering 7...	2
Mechanical Engineering 12, *6	2	Mechanical Engineering 15c, †4	2
Mechanical Engineering 15b, †2	1	Mechanical Engineering 16..	2
Mechanical Engineering 18, *6	2	Mechanical Engineering 17, *6	2
Civil Engineering 1b	2	Mechanical Engineering 13..	2
Civil Engineering 2a	1-2	Mechanical Engineering 20..	1
Civil Engineering 22	1	Electives	3
Civil Engineering 23	2	Economics 6	3
Electrical Engineering 10a...	3		17
Electrical Engineering 11a, †4	2		
	18 1-2		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

The Electrical Engineering Curriculum

This curriculum is intended to provide a thorough preparation in the scientific principles involved in the practice of electrical engineering; to explain and illustrate the application of these principles to the design, construction, installation, and operation of apparatus with which the electrical engineer has to deal; and to give practice and experience in the care and running of the same. In addition to this purely electrical work the student takes up carpentry, forge work, machine work, mechanical drawing, mathematics, physics, mechanics, steam engineering, and other subjects allied to engineering work. The general courses, required or elective, include English language, logic, psychology, history, political economy, education, sociology, and constitutional law.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical substation converting from a three phase, 60 cycle, 115 volt alternating current system to direct current, by means of rotary converters and belted alternating current motors driving direct current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7½ kilowatt special auto-transformers giving variable pressure for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 2 and 4	5	Mathematics 4 and 6a	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2-3

SOPHOMORE YEAR

Drawing 2a	2	Drawing 4, *6	2
English 2a	2	English 2b	1
Mathematics 6b and 7	5	Mathematics 8	5
Mechanical Engineering 1b, *4	1 1-2	Mechanical Engineering 2, *4	1 1-2
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	19 1-2	Physics 5, *5	2
			20 1-2

JUNIOR YEAR

Electrical Engineering 1a	2	Electrical Engineering 1b	3
Mechanical Engineering 5b, *4	1 1-3	Electrical Engineering 2b, †2	1
Mechanics 5	5	Mechanical Engineering 5b, *4	1 1-3
Physics 11, *7 1-2	3	Mechanical Engineering 8	3
Economics 1a	2	Mechanical Engineering 10	2
Economics 7a or History 5	2	Mechanics 6	5
Elective	3 2-3	Economics 2a	2
	19		17 1-3

SENIOR YEAR

Electrical Engineering 3a	3	Electrical Engineering 3b	2
Electrical Engineering 4a	3	Electrical Engineering 5b	1 1-2
Electrical Engineering 5a, †4	2	Electrical Engineering 7b	2
Electrical Engineering 6a, †4	2	Electrical Engineering 6b, †4	2
Mechanical Engineering 26, †3	1 1-2	Electrical Engineering 8b, *4	1 1-3
Mechanical Engineering 11	3	Electrical Engineering 4b	1
Civil Engineering 1a and 2a	2 1-2	Mechanical Engineering 19, *4	1 1-3
Civil Engineering 23	2	Elective	3 1-2
Civil Engineering 22	1	Economics 6	3
	20		17 2-3

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

The Chemical Engineering Curriculum

This curriculum is especially designed for those who intend to enter industries that require a more or less extensive knowledge of chemistry, as well as some knowledge of applied mathematics and of the engineering studies, thus fitting them for positions as chemists or managers of manufacturing plants.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 1a and 3	4	English 1b and 4	3
German 1a or French 3a	3	German 1b or French 3b	2
Mathematics 2 and 4	5	Mathematics 2 and 6a	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	19 2-3		18 2-3

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
English 2a	2	Chemistry 7, 3 and †4	5
Mathematics 22a	2	English 2b	1
Mechanical Engineering 1b, *4	1 1-3	Mathematics 22b	2
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	19 1-3		21

JUNIOR YEAR

Chemistry 8	3	Chemistry 32b	2
Chemistry 18, †8	4	Chemistry 19, †8	4
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 9, †4	2	Chemistry 13, †3	1 1-2
Chemistry 29a	2	Mechanical Engineering 10	2
Mechanical Engineering 26, †3	1 1-2	Mechanical Engineering 2, *4	1 1-3
Physics 11, *7 1-2	3	Elective	4
	18 1-2		17 5-6

SENIOR YEAR

Chemistry 24a	2	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 12, †6	3	Chemistry 28, †2	1
Chemistry 33 or Geology 6	2	Chemistry 29b	2
Electrical Engineering 10a	3	Chemistry 25, †4	2
Electrical Engineering 11a, †4	2	Elective	5
Elective	2		17
	17		

DEPARTMENTS OF INSTRUCTION

CHEMISTRY

Professor McKee; Professor Easley; Mr. Burghart; Mr. Brann; Mr. Buswell

1. General Chemistry.—This course deals with the general principles of the science. Lectures and recitations. *Two hours a week.* Fall semester.

2. General Chemistry.—This course is a continuation of course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds and chemical properties. Lectures and recitations. *Three hours a week.* Spring semester.

3. Laboratory Chemistry.—Laboratory work to accompany course 1. †*Four hours a week.* Fall semester.

4. Laboratory Chemistry.—A continuation of course 3 to accompany course 2. †*Four hours a week.* Spring semester.

7. Organic Chemistry.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory work. The text followed is Holleman's Text-book of Organic Chemistry. Holleman's Laboratory Manual is used for the experimental work. *Three hours class room and* †*four hours laboratory work a week.* Spring semester.

8. Organic Chemistry.—A continuation of course 7. The work is chiefly in the aromatic series. *Three hours a week.* Fall semester.

(In the fall semester of 1910-1911 course 7 will be given as described in the 1908-1909 catalog and in the spring semester course 8 as described in the 1908-1909 catalog and course 7 as described just above.)

9. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils and the common coals. †*Four hours a week.* Fall semester.

12. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. †*Six hours a week.* Fall semester.

13. Descriptive Mineralogy.—The text-book is Moses and Parson's Elements of Mineralogy. †*Three hours a week.* Spring semester.

14. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. †*Eight to* †*sixteen hours a week.* Fall semester.

15. Qualitative Analysis.—A continuation of course 14. †*Six hours a week.* Spring semester.

16. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Lincoln and Walton's Exercises in Elementary Quantitative Chemical Analysis. Open to students who have had course 14. †*Ten hours a week.* This course is offered each semester.

18. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravimetric and volumetric methods are used. Open to students who have taken course 16. † *Eight hours a week.* Fall semester.

19. Special Quantitative Methods.—Open to students who have completed course 16. (a) Water analysis. (b) Electroanalysis. (c) assaying. (d) Special volumetric analysis. (e) Organic analysis. (f) Toxicology and urinalysis. Each subdivision ordinarily requires † *four hours a week.* Work under this course is offered each semester.

22. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than* † *ten hours a semester* for its completion. Spring semester.

23. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. *Three hours a week.* Fall semester.

24a. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. *Two hours a week.* Fall semester.

24b. Industrial Chemistry.—A continuation of course 24a. *Two hours a week.* Spring semester.

25. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed courses 16 and 18. † *Four hours a week.* Spring semester.

26. Physical-Chemical Methods.—The course will include, determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as the refractometer, polariscope, and spectroscope. † *Six hours a week.* Spring semester.

28. Dyeing.—The practical application of dyes to cotton, wool, and silk. † *Fifteen hours a week* for two weeks.

29a. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, properties and alloys of iron. *Two hours per week.* Fall semester.

29b. Metallurgy of the Metals other than Iron.—A course similar to 29a. The metals other than iron and steel are studied. *Two hours a week.* Spring semester.

31. Chemical Reactions.—Principles governing chemical reactions; their application to equations; advanced equation writing; oxidation and reduction. The text-book is Prescott and Johnson's Qualitative Analysis. *Two hours a week.* Spring semester.

32a. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures and recitations. *Three hours a week.* Fall semester.

32b. Physical Chemistry.—A continuation of course 32a. *Two hours a week.* Spring semester.

33. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. *Two hours a week.* Fall semester.

Laboratory fees covering general chemicals, gas, etc., are as follows: Courses 3, 4, 14, 16 and 22: $5. Courses 7, 12, 15 and 18: $3. Courses 9, 13, 25, 26, 28 and each part of 19: $2.

Broken apparatus and special chemicals are paid for at the chemical supply room by use of a "breakage card" obtained from the University Cashier. The portion of this card which has not been used will be redeemed at the end of the semester by the Cashier.

For courses in biological and agricultural chemistry see the description of courses given by the department of Biological and Agricultural Chemistry.

Summer Term

Professor McKee; Mr. Burghart

1. General Inorganic Chemistry.—A review of the classroom work of the freshman year. Experimental lectures and recitations. *Five times a week.*

2. Elementary Chemistry.—A modification of course 1 arranged for those students who wish to review elementary chemistry before taking the examination for entrance to the University.

3. Methods of Laboratory Manipulation.—† *Six hours a week.*

4. Chemistry of Daily Life.—A lecture course in which are discussed from the chemical standpoint water, photography, antiseptics and disinfectants, alcoholic and non-alcoholic beverages, fertilizers, paper-making, baking powders, perfumes, paints, dyes, etc. *Three times a week.*

5. Laboratory work in general and analytic chemistry arranged according to the needs of those attending the summer term.

CIVIL ENGINEERING

Professor Boardman; Professor Brown; Professor Bean; Mr. Kaulfuss; Mr. Jordan; Mr. Philbrook

1a. Plane Surveying.—A course on the general principles of plane surveying; instruments, their adjustments and uses; the variation of the magnetic needle, and the determination of the true north; direct leveling; land survey computations. The text-book used is Breed and Hosmer's The Principles and Practice of Surveying, Vol. I. *Three hours a week. Last twelve weeks.* Fall semester.

1b. Plane Surveying.—A course similar to 1a, given to students in the mechanical and electrical engineering courses. *Two hours a week.* Fall semester.

2a. Field Work in Surveying.—The use of the chain, compass, transit, and level. This course is given before the student has received class room instruction, and is designed to make him familiar with the uses of the instruments, such as running lines, turning angles, reading verniers and rods, etc. **Six hours a week. First six weeks.* Fall semester.

2b. Plotting.—This course consists chiefly of map drawing from field notes, by the different methods in common use. **Four hours a week. First twelve weeks.* Spring semester.

2c. Field Work in Surveying.—A continuation of course 2a. This course consists of original surveys, problem work, adjustment of instruments, note keeping, etc. The text-book used is Pence and Ketchum's Surveying Manual. **Six hours a week. Last six weeks.* Spring semester.

3a. Railroad Curves.—The theory of railroad curves, switches and turnouts. The text-book used is Allen's Railroad Curves and Earthwork, together with Field and Office Tables, by the same author. *Three hours a week. First twelve weeks.* Spring semester.

3b. Earthwork.—A continuation of course 3a on the methods of setting slope stakes and of calculating earthwork. *Three hours a week. First six weeks.* Fall semester.

4a. Railroad Field Work.—This course consists of practice in running in railroad curves. A general application of the theories of course 3a. *†Six hours a week. Last six weeks.* Spring semester.

4b. Railroad Field Work.—The survey of a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. **Six hours a week. First nine weeks.* Fall semester.

4c. Railroad Office Work.—The office work of mapping the notes taken in course 4b, including the calculation of the earthwork. **Six hours a week. Last nine weeks.* Fall semester.

5. Highway Engineering.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. The construction and maintenance of the different pavements on city streets. Lectures and recitations. *Three hours a week. Last twelve weeks.* Fall semester.

6. Drawing.—This course includes topographical drawing, lettering and tracing; stereotomy, giving the application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, abutments, bridge piers, etc. **Six hours a week.* Spring semester.

8. Sanitary Engineering.—Sewerage systems; drainage and sewerage of towns; sewage disposal; sewage treatment; water purification; sanitation and the public health. Required of students electing Option 1. *Two hours a week.* Spring semester.

9a. Advanced Surveying.—This course consists of lectures and readings on the theory of base line measurement, triangulation, precise leveling, topographical surveying, and the use of the plane table, and is a preparation for course 9b. The text-book is Breed and Hosmer's The Principles and Practice of Surveying, Vol. II. *One hour a week.* Spring semester.

9b. Advanced Surveying.—This course consists of the practical application in the field of the principles given in course 9a. The work is given during the two weeks following commencement, and counts as 2-5 credit.

10. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observation; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. The text-book used in this course is Russell's Hydraulics. *Three hours a week.* Spring semester.

11. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter, and various forms of floats. Trips are made to the United States Geological Survey gaging station, located on the Penobscot river between Howland and West Enfield, where discharge measurements are made, where, at this time of year, a discharge of from 4,000 to 10,000 cubic feet per second is usually found. The data thus obtained is used together with that obtained from the Survey to plot the rating curve, etc. The measurements taken are reported to the Survey. The charge for this course is $5.00. †*Four hours a week.* Fall semester.

12. Structures.—A continuation of course 21. The theory of stresses in framed structures, including the plate girder, bridge trusses, and roof trusses; reinforced concrete; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.* Fall semester.

13a. Structures.—A continuation of course 12. This course includes a study of the higher types of structures such as drawbridges, cantilever bridges, suspension bridges, arches, and steel buildings. *Three hours a week.* Spring semester.

13b. Graphic Statics.—This course consists of class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by the graphical method. *Two hours a week.* Spring semester.

14. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. † *Twelve hours a week.* Fall semester.

15. Designing.—A continuation of course 14. † *Six hours a week.* Spring semester.

16. Hydraulic Engineering.—Rainfall, evaporation, and stream flow. The development and utilization of water power. The development of the modern turbine. This course is given by lectures and recitations. Required of students electing Option 1. *Two hours a week.* Fall semester.

17. Hydraulic Engineering.—A continuation of course 16. *Two hours a week.* Spring semester.

19. Railroad Engineering.—Lectures and recitations on the methods and materials of railroad construction. Subgrade; roadbed; trestles; culverts; track; street crossings; yards and terminals, signals and interlocking; track work and maintenance. The text-book used is Wilson's "Elements of Railroad Track and Construction." Required of students electing Option 2. *Two hours a week.* Spring semester.

20. Masonry Construction.—A course including the discussion of building stone, cements and their tests, mortar, concrete, piles, foundations, pneumatic caissons, open caissons, bridge piers, and abutments. Lectures and recitations. The text-book used is Baker's Treatise on Masonry Construction. *Two hours a week.* Fall semester.

21. Structures.—The theory of the simple beam; loads; reactions; vertical shear; shear; bending moment; influence lines. The object of

this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, the moment diagram, different tables, and the slide rule. The text-book used is Grover and Boardman's Notes on Beams and Simple Framed Structures. *Two hours a week.* Spring semester.

22. Foundations.—Building stones; manufacture of cement; tests of cement. Mortar; concrete, both plain and reinforced. This is a course of lectures given to students in the mechanical and electrical engineering courses. *One hour a week.* Fall semester.

23. Hydraulics.—A short course which includes the main principles given in course 10. Given to students in the mechanical and electrical engineering courses. The text-book used is the same as that used in course 10. *Two hours a week.* Fall semester.

24. Railroad Engineering.—A map reconnaissance for a railroad about ten to fifteen miles in length, where the theories of course 25 are applied. A profile is made, grades established and drainage areas calculated. Culverts, rails, switch points, frogs, and ties are designed, and the layout of a railroad yard made. Required of students electing Option 2. † *Six hours a week.* Spring semester.

25a. Railroad Engineering.—A course discussing the economics of railroad location and operation. Traffic; operating expenses; the locomotive and its work; distance; grades; curves. The text-book used is Raymond's "Elements of Railroad Engineering." Required of students electing Option 2. *Two hours a week.* Fall semester.

25b. Railroad Engineering.—A continuation of 25a. *One hour a week.* Spring semester.

26. Cement Testing.—This course consists of laboratory work for the purpose of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is given in conjunction with Mechanical Engineering 25, Testing, and is required of students in mechanical engineering in the fall semester and of students in civil engineering in the spring semester. *The time varies.*

ELECTRICAL ENGINEERING

PROFESSOR GANONG; MR. CHILDS; MR. CHESWELL

1a. ELEMENTS OF ELECTRICAL ENGINEERING.—This course traces the development of electrical engineering from the practical application of laws studied in physics. The work is taken up by lectures, text-book, and problems. Required of juniors in electrical engineering. *Two hours a week.* Fall semester.

1b. ELEMENTS OF ELECTRICAL ENGINEERING.—A continuation of course 1a, showing the application of fundamental principles to the construction of electrical machinery and to general engineering problems. Required of juniors in electrical engineering. *Three hours a week.* Spring semester.

2b. LABORATORY WORK.—Electrical measurements, and the operation and testing of direct current generators and motors. This course illustrates the practical application of the work given in courses 1a and 1b. Required of juniors in electrical engineering. The charge for this course is $2.00. † *Three hours a week.* Spring semester.

3a. ELEMENTS OF ALTERNATING CURRENT CIRCUITS.—A study of the conditions which arise in connection with the introduction of variable and alternating electric pressures and the production of such pressures, measurements, and calculations for the same. Required of seniors in electrical engineering. *Three hours a week.* Fall semester.

3b. ALTERNATING CURRENT MACHINERY.—A continuation of course 3a, taking up the application of the fundamental elements of alternating currents to the design, construction, and operation of apparatus and machinery; the study of polyphase apparatus in the generation, transmission, distribution, and utilization of power. Required of seniors in electrical engineering. *Four hours a week for the first nine weeks.* Spring semester.

4a. ELECTRICAL DEVELOPMENT.—A course on the design, construction, and cost of electro-magnets and clutches, electric heating apparatus, direct current generators and motors, and the general features of the design of alternating current machinery. The study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in electrical engineering. *Three hours a week.* Fall semester.

4b. Reference Work.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and presents the results of such investigation to the class. Also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in electrical engineering. *One hour a week.* Spring semester.

5a. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in course 4a. Calculations are made for electro-magnetic devices, and for direct current generators, involving a knowledge of the fundamental electrical principles of design, the principles of mechanical design, cost of materials and cost of labor, and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in electrical engineering. † *Four hours a week.* Fall semester.

5b. Design of Direct and Alternating Current Machinery.—A continuation of course 5a. Drawing room work. Required of seniors in electrical engineering. † *Four hours a week for thirteen weeks.* Spring semester.

6a. Laboratory Work.—A continuation of course 2b, taking up the testing of direct current apparatus and machinery, and alternating current measurements; investigation of power plant equipments and electric lighting. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

6b. Laboratory Work.—A course showing the practical application of the work done in courses 3a and 3b, and continuing the laboratory work of course 6a, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Spring semester.

7b. Electrical Engineering.—A course in general engineering applications and practical problems, such as will be met with after the student leaves college, applying all the work and training of the course and the technical ability of the student. Required of seniors in electrical engineering. *Four hours a week, first nine weeks.* Spring semester.

8b. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus, and development of original ideas of the student; also for testing, repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in electrical engineering. *Sixty-four hours during the senior year.*

9a. Thesis Work.—The designing of electrical apparatus or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in electrical engineering. *Fall semester and through the senior year, as arranged.*

13b. Electric Railway Engineering.—A study of the preliminary steps taken in electric railway engineering. The selection of the proper motor equipment for a given class of service. Car, bond, and transmission testing. An elective course open to seniors in electrical engineering. *Two hours a week.* Spring semester.

10a. Electrical Development and Application.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of seniors in mechanical engineering. *Three hours a week.* Fall semester.

10b. Alternating Current Development and Application.—An elective course for seniors in mechanical engineering which continues the work taken up in course 10a. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from a mechanical engineer's point of view. *Two hours a week.* Spring semester.

11a. Laboratory Work.—For mechanical engineers. Electrical measurements, and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in course

10a, and the work is arranged for the particular needs of the mechanical engineer. This course is open to chemical and civil engineering students who have previously elected one of the preliminary electrical courses. This course may be followed by the regular courses 6a and 6b, by those wishing to become familiar with alternating current machinery. Required of seniors in mechanical engineering. The charge for this course is $3.00. †*Four hours a week.* Fall semester.

12b. Electrical Transmission and Distribution of Power.—An elective course for seniors in civil engineering, taking up the elements of electrical measurement, the generation, transmission, and utilization of power, covering the electrical feature of water power development. *Two hours a week.* Spring semester.

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences.

MECHANICAL ENGINEERING

Professor Jewett; Professor Curtis; Mr. Davee; Mr. Carter; Mr. Cheswell

1a. Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern woodworking practice, and also teach him to work from dimensioned drawings. These exercises lead up to pattern-making. The pattern work consists of making complete patterns and core boxes from drawings. Required of students in mechanical engineering. Charge for materials, $4.00. **Six hours a week.* Fall semester.

1b. Woodworking.—A shorter course than 1a, arranged for students in electrical engineering. Required. Charge for materials, $4.00. **Four hours a week.* Fall semester.

2. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in mechanical and electrical engineering. Charge for material, $5.00. **Four hours a week.* Spring semester.

3. Kinematical Drawing.—This course supplements 4. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in mechanical engineering. **Four hours a week.* Fall semester.

4. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. The text-book is Schwamb and Merrill's Elements of Mechanism. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

5a. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Required of students in mechanical engineering. Charge for materials, $5.00. **Six hours a week.* Fall and spring semesters.

5b. Machine Work.—A shorter course than 5a and 5b, required of students in electrical engineering. Charge for material $5.00. **Four hours a week.* Fall and spring semesters.

6. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with course 5, ten per cent. of the hours registered for under course 5 being applied to foundry work.

7. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanisms. The Zeuner, Bilgram, and other valve-diagrams are made use of in this connection. Practical problems are solved in the drawing room. Required of students in mechanical engineering. *Two hours a week.* Spring semester.

8. Machine Design.—A study of the designing of machines, involving the selection of materials, proportioning of parts for strength and rigidity, etc. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

9. Materials of Engineering.—Properties of the metals, timber, hemp rope, etc., and methods of testing. Protective coatings and preservatives. Required of students in mechanical engineering. *Two hours a week.* Fall semester.

10. Elementary Steam Engineering.—Types and details of steam boilers and engines and auxiliary machinery. A consideration of fuels

and the chemistry of combustion. The use of the steam engine indicator. Required of students in mechanical and electrical engineering. *Two hours a week.* Spring semester.

11. Thermodynamics.—The fundamental theories relating to the steam engine and other heat engines. Steam calorimeters, injectors, compressors and refrigerating machinery included. Required of students in mechanical and electrical engineering. Course 15 is a prerequisite. *Three hours a week.* Fall semester.

12. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room. Required of students in mechanical engineering. **Six hours a week.* Fall semester.

13. Hydraulic Machinery.—A study of the various forms of machinery used with hydraulic power, either in its development or its application. Required of students in mechanical engineering. Civil Engineering 23 is a prerequisite for this course. *Two hours a week.* Spring semester.

15a. Mechanical Laboratory.—The calibration of instruments used in engineering testing followed by the more elementary experimental work. Required of juniors in mechanical engineering. The charge for the course is $2.00. †*Three hours a week.* Spring semester.

15b. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, valve settings, etc. Required of seniors in mechanical engineering. The charge for the course is $2.00. †*Two hours a week.* Fall semester.

15c. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in mechanical engineering. The charge for the course is $2.00. †*Four hours a week.* Spring semester.

16. Steam Engineering.—A continuation of courses 10 and 11, dealing with steam engines, steam turbines, air compressors, refrigerating machines, and gas engines. Considerations affecting the design and efficiency of operation of heat motors, and the lay-out of power plants.

Required of students in mechanical engineering. *Two hours a week.* Spring semester.

17. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general machine design. A steam engine is partially designed in the drawing room. Required of students in mechanical engineering. **Six hours a week.* Spring semester.

18. Machine Design.—A continuation of course 8, including the execution of the design of some typical machines. Required of students in mechanical engineering. **Six hours a week.* Fall semester.

19. Machine Drawing.—Instruction in modern drafting-room methods, shop terms, etc. The practical application of drawing to use in the construction of machines. Required of students in mechanical engineering. **Four hours a week.* Spring semester.

20. Heating and Ventilation.—A lecture course. Required of students in mechanical engineering. *One hour a week.* Spring semester.

21. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.* Fall and spring semesters.

22. Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

24. Mechanism of Machines.—Lectures supplementing course 4. Required of students in mechanical engineering. *One hour a week.* Fall semester.

25. Strength of Materials by Test.—A course in the mechanical laboratory for students in civil engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

26. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the student in electrical engineering. Required. The charge for the course is $2.00. † *Three hours a week.* Fall semester.

MECHANICS AND DRAWING

Professor Weston; Professor Grover; Mr. Farnham

1. Drawing.—Instruction and practice in technical freehand drawing and lettering, in the care of drawing instruments and their use in elementary problems involving right lines, circles, conic sections and orthographic projections. The text-book used is Anthony's Mechanical Drawing. **Six hours a week.* Fall semester.

2. Drawing.—A continued study of the methods of orthographic projection, isometric projection, oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. The text-book used is Anthony's Mechanical Drawing. **Six hours a week.* Spring semester.

3. Drawing.—The elementary principles and problems of descriptive geometry including intersections and developments. **Six hours a week.* Fall semester.

4. Drawing.—A continued study of the making of working drawings of simple machines together with instruction and practice in making titles for the same. This is followed by several weeks work in linear perspective and line shading. **Six hours a week.* Spring semester.

5. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curve; torsional stresses and theories of stress in long columns. *Five hours a week.* Fall semester.

6. Mechanics.—A continuation of course 5. *Five hours a week.* Spring semester.

7. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function, with applications to problems in gravitation, hydromechanics, etc. *Two hours a week.* Fall semester.

8. Advanced Mechanics.—A continuation of course 7. *Three hours a week.* Spring semester.

10. Free-hand Drawing.—Free-hand pencil practise in the drawing of designs involving straight lines and curves, in lettering, in model drawing, and in pictorial perspective. A general course designed for non-engineering students. **Six hours a week.* Fall semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 196.

PHYSICAL TRAINING

The courses in this department are described on page 197.

PHYSICS

The courses in this department are described under the College of Arts and Sciences.

COLLEGE OF PHARMACY

FACULTY OF INSTRUCTION

ROBERT JUDSON ALEY, PH. D., LL. D
President of the University
JAMES NORRIS HART, C. E., M. S., Sc. D.
Dean of the University, and Professor of Mathematics and Astronomy
LUCIUS HERBERT MERRILL, B. S., Sc. D.
Professor of Biological and Agricultural Chemistry
FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science
JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*
GILMAN ARTHUR DREW, PH. D. *Professor of Biology*
WILBUR FISK JACKMAN, B. S., PH. C. *Professor of Pharmacy*
RALPH KNEELAND JONES, B. S. *Librarian*
JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages
ROLAND PALMER GRAY, M. A. *Professor of English*
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
GUY ANDREW THOMPSON, M. A. *Professor of English*
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Botany*
CHARLES ALBERT VARNUM, Lieutenant-Colonel, U. S. A.
Professor of Military Science and Tactics
EDGAR RAMEY WINGARD, M. S.
Director of Physical Culture and Athletics
WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Assistant Professor of Romance Languages
*HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics

*Absent on leave.

LEON ELMER WOODMAN, PH. D. *Assistant Professor of Physics*
CHARLES PRESTON WEAVER, M. A.
Assistant Professor of English
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
WALTER EVERETT PRINCE, M. A. *Instructor in English*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
BERTRAND FRENCH BRANN, B. S. *Instructor in Chemistry*
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMOND WILBUR, B. S. *Instructor in Mathematics*
ALICE MIDDLETON BORING, PH. D. *Instructor in Zoölogy*
ERNEST CLAUDE DREW, B. S. *Instructor in Physics*
VICTOR ALVIN KETCHAM, B. A., LL. B. *Instructor in English*
HAROLD MERTON ROYAL, B. S. *Instructor in Physics*
LLOYD MEEKS BURGHART, B. A. *Instructor in Chemistry*
ARTHUR MOSES BUSWELL, B. A.
Instructor in Industrial Chemistry

GENERAL INFORMATION

The College of Pharmacy comprises:
The Pharmacy Curriculum
The Short Curriculum in Pharmacy

The Pharmacy Curriculum

This curriculum is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and a thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, as is offered in other college courses. Thirty credits are required for graduation.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this curriculum. The growing importance of the biological, sanitary, and medical sciences, and the pharmacist's relation to them, make it increasingly necessary to his

success that he be not only a well trained man in the technical branches but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy and the best chemical and pharmaceutical journals.

PHARMACY

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 1a	1	English 1b	1
English 3	3	English 4	2
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 2 and 4	5	Mathematics 1 and 2	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	2-3	Physical Training *2	2-3
	17 2-3		16 2-3

Sophomore Year

Biology 1	5	Biology 1	5
Chemistry 14, †8	4	Chemistry 7	5
English 2a	2	English 2b	1
Military 2, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	20		19

JUNIOR YEAR

Biological Chemistry 1	5	Bacteriology 1, †6	3
Chemistry 8	3	Bacteriology 2	1
Chemistry 16, †10	5	Chemistry 19d, †4	2
Pharmacy 5	2	Chemistry 19f, †2	1
Plant Histology 10	4	Chemistry 31	2
Electives	1	Lab. Biol. Chem. 2, †6	3
	20	Pharmacy 6	4
		Electives	4
			20

SENIOR YEAR

Pharmacy 2	5	Pharmacy 4	5
Pharmacy 3, †12	6	Pharmacy 9, †3	1 1-2
Pharmacy 7	3	Pharmacy 10, †10	5
Elective	4	Pharmacy 11	3
	18	Elective	4
			18 1-2

From courses in history, philosophy, and economics a total of at least five hours must be chosen.

The number of hours required and elected need not exceed 150, or 30 credits.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Short Curriculum in Pharmacy

This curriculum of two years, is designed for those who, for lack of time or for other reasons, are unable to take the curriculum of four years. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The curriculum corresponds, in general, to the usual full curriculum of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this curriculum does not warrant extending to others than advanced students the privilege of electives.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Botany 13	3
Chemistry 14, † 16	8	Chemistry 2	3
Pharmacy 1	5	Chemistry 7	5
Pharmacy 5	2	Chemistry 16, † 10	5
	17	Pharmacy 6	4
			20

Sophomore Year

Chemistry 8	3	Bacteriology 1, † 6	3
Pharmaceut. Histol. 14	3	Chemistry 19f	1
Pharmacy 2	5	Chemistry 31	2
Pharmacy 3, † 12	6	Pharmacy 4	5
Pharmacy 7	3	Pharmacy 9, † 3	1 1-2
	20	Pharmacy 10, † 10	5
		Pharmacy 11	3
			20 1-2

Students who complete this curriculum in a satisfactory manner receive the degree of Pharmaceutical Chemist.

DEPARTMENTS OF INSTRUCTION

BOTANY

The courses in this department are described under the College of Arts and Sciences.

CHEMISTRY

The courses in this department are described under the College of Technology.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 196.

PHARMACY

PROFESSOR JACKMAN

1. PHARMACEUTICAL CHEMISTRY.—Chemical formulæ; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. The text-book is Prescott and Johnson's Qualitative Chemical Analysis. *Five hours a week.* Fall semester.

2. PHARMACY.—Pharmacopœias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; pharmaceutical arithmetic and problems; the chemical elements, official salts, their preparations; organic compounds, their official preparations; official drugs, their preparations; animal preparations; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall semester.

3. LABORATORY PHARMACY.—Official and National Formulary preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinc-

tures, and other galenicals; official tests of chemicals, drugs, and preparations for identity, strength and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. † *Twelve hours a week.* Fall semester.

4. Pharmacopœia.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring semester.

5. Inorganic Pharmacognosy.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall semester.

6. Organic Pharmacognosy.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Culbreth's Materia Medica. *Four hours a week.* Spring semester.

7. Materia Medica.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall semester.

9. Pharmacy Readings.—Current pharmacy literature; research and reference readings; abstracting; reports. † *Three or five hours a week.* Spring semester.

10. Laboratory Pharmacy.—A continuation of course 3. † *Ten hours a week.* Spring semester.

11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to principles and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc. The text-book is Ruddiman's Incompatibles in Prescriptions. *Three hours a week.* Spring semester.

PHYSICAL TRAINING

The courses in this department are described on page 197.

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all students with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

PROFESSOR VARNUM

1. MILITARY, FIRST YEAR'S COURSE.
   (a) PRACTICAL:
      1—U. S. Infantry Drill Regulations, to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.
      2—Infantry Target Practice.
      3—Field Service Regulations.
      4—Guard Duty.
   (b) THEORETICAL:
      1—U. S. Infantry Drill Regulations, to include the School of the Company.
      2—Manual of Guard Duty
      3—Field Service Regulations.
      4—Small Arms Firing Regulations.

Required of all students, except as provided on page 41. *Three hours, or the equivalent, a week for the freshman year, counting one-fifth credit.*

2. MILITARY, SECOND YEAR'S COURSE.
   (a) PRACTICAL:
      The same as course 1 (a).
   (b) THEORETICAL:

1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.
2—Records and Official Papers.
3—Small Arms Firing Regulations.
4—Field Service Regulations.

Required of all students, except as provided on p. *Three hours, or the equivalent, a week for the sophomore year, counting one-fifth credit.*

3. Military, Third Year's Course.

(a) Practical:

Duties consistent with rank in carrying out (a) in courses 1 and 2.

(b) Theoretical:

Assistant instructors over those taking course 1 (b).

Open to all who have completed course 2. *Three hours, or the equivalent, a week, counting one-fifth credit.*

4. Military, Fourth Year's Course.

(a) Practical:

The same as for course 3 (a).

(b) Theoretical:

Assistant instructors over those taking course 2 (b).

Open to all who have completed course 3. *Three hours or the equivalent, a week, counting one-fifth credit.*

PHYSICAL TRAINING

Director Wingard

1. Physical Training.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movements; elementary dumbbell, wand, and apparatus exercises. * *Two hours a week.* Fall semester.

2. Physical Training.—Intermediate and advanced class exercises and combination apparatus work. * *Two hours a week.* Spring semester.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

ROBERT JUDSON ALEY, PH. D., LL. D.
President of the University

WILLIAM EMANUEL WALZ, M. A., LL. B.
Dean and Professor of Law

EDGAR MYRICK SIMPSON, B. A.
Assistant Professor of Real Property and Evidence

FOREST JOHN MARTIN, LL. B.
Resident Lecturer on Common Law Pleading and Maine Practice

GEORGE HENRY WORSTER, LL. M. *Instructor in Law*

BARTLETT BROOKS, B. A., LL. B.
Instructor in Contracts and Negotiable Paper

LUCILIUS ALONZO EMERY, M. A., LL. D., Chief Justice of the Supreme Court of Maine *Lecturer on Roman Law and Probate Law*

CHARLES HAMLIN, M. A., LL. D., United States Commissioner; Reporter of Decisions of the Supreme Judicial Court of Maine, 1888-1904 *Lecturer on Bankruptcy and Federal Procedure*

LOUIS CARVER SOUTHARD, M. S., LL. D., Member of the Massachusetts Bar and of the United States Supreme Court Bar
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
Lecturer on Admiralty Law

ISAAC WATSON DYER, B. A.
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

HERBERT MILTON HEATH, M. A. *Lecturer on Cross-Examination*

RALPH KNEELAND JONES, B. S. *Librarian*

LEIGH IRVING HARVEY *Stenographer*

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies since the beginning of 1908 the entire sixth story of the Exchange building, at the corner of State and Exchange streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains about 3,000 volumes, including the reports of the Supreme Court of the United States, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the Complete Reporter System, the Lawyers' Reports Annotated, all the Law Encyclopædias, and a consideraple number of text-books, as also the English Reports, full verbatim reprint, and the American Digest.

Admission

Graduates of any college or satisfactory preparatory school are admitted to the college as candidates for the degree of Bachelor of Laws without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case according to the rules of the Association of American Law Schools. Attention is called to a change made in these rules by the Association of American Law Schools at its meeting at Narragansett Pier, R. I., in August, 1905. The following resolution was then passed:

"Section one of Article VI of the Articles of Association shall be amended so that it will read as follows:

"I. It shall require of all candidates for its degree at the time of their admission to the school the completion of a four years' high school course, or such a course of preparation as would be accepted for admission to the state university, or to the principal colleges and universities in the state where the law school is located; provided, that this requirement shall not take effect until September, 1907."

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other schools which are members of the Association of American Law Schools, are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices otherwise qualified are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, on presentation of their certificates of admission to the bar at the beginning of the fall term, while graduate students may take one of the two courses leading to the degree of Master of Laws.

Intended Increase of Entrance Requirements

In harmony with the greater demands made by the legal profession and the public, and in recognition of the fact that University standards throughout the country are being gradually raised, it is intended in course of time to go beyond these requirements, and, in addition to the high school education prescribed, two years college work may be required as a preliminary preparation of all candidates for the law degree.

Methods of Instruction

The College is not committed exclusively to any one method of instruction, and recognizes the great value of lectures by able men and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle" may, perhaps, adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the college, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorities cited, are submitted to the presiding judge.

The aim and spirit of the college are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Course of Study

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. It is believed that expenses in this department, as well as in other departments of the University, are lower than in any other New England college.

Degrees

At the completion of the three years' course the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the course leading to the master's degree.

COURSES OF INSTRUCTION

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Agency.—Text-book, Huffcut's Cases on Agency. *Three hours a week.* Spring term. Mr. Worster.

3. Bankruptcy.—Lectures. *Two hours a week.* Winter term. General Hamlin.

4. Brief Making and the Use of Law Books.—Text-book, Brief Making and the Use of Law Books. *One hour a week.* Fall term. Professor Walz.

5. Carriers.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

6. Carriers.—A continuation of course 5. *Three hours a week.* Winter term. Professor Simpson.

7. Common Law Pleading.—Lectures. *Two hours a week.* Winter term. Mr. Martin.

8. Common Law Pleading.—A continuation of course 7. *One hour a week.* Spring term. Mr. Martin.

9. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

10. Constitutional Law.—Boyd's Cases. *Two hours a week.* Spring term. Mr. Worster.

11. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Mr. Brooks.

12. Contracts.—A continuation of course 11. *Three hours a week.* Winter term. Mr. Brooks.

13. Contracts.—A continuation of course 12. *Two hours a week.* Spring term. Mr. Brooks.

14. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

15. Criminal Law.—A continuation of course 14. *Three hours a week.* Spring term. Professor Simpson.

16. Cross-Examination.—Lectures. Mr. Heath.

17. Damages.—Beale's Cases on Damages. *Three hours a week* Winter term. Mr. Worster.

18. Domestic Relations.—Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

19. Equity Jurisprudence.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz

20. Equity Jurisprudence.—A continuation of course 19. *Three hours a week.* Winter term. Professor Walz.

21. Equity Pleading.—Lectures. *Two hours a week.* Winter term. Professor Simpson.

22. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

23. Evidence.—A continuation of course 22. *Three hours a week.* Winter term. Professor Simpson.

24. Evidence.—Lectures. *Number of hours not fixed.* Winter term. Mr. ————

25. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

26. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

27.—Federal Jurisdiction and Procedure.—Lectures. Mr. Dyer.

28. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

29. General Review.—Gardner's Review. *One hour a week.* Winter term. Professor Walz.

30. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

31. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

32. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Mr. Worster.

33. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

34. Legal Ethics.—Code of American Bar Association. *One hour a week.* Spring term. Professor Walz.

35. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Martin.

36. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

37. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

38. Negotiable Paper.—Huffcut's Cases. *Two hours a week.* Winter term. Mr. Brooks.

39. Negotiable Paper.—A continuation of course 38. *Three hours a week.* Spring term. Mr. Brooks.

40. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

41. Private Corporations.—Smith's Cases. *Four hours a week.* Fall term. Mr. Worster.

42. Private Corporations.—A continuation of course 41. *Three hours a week.* Winter term. Mr. Worster.

43. Private Corporations.—Lectures. Mr. Dyer.

44. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

45. Real Property.—Tiffany on Real Property. *Four hours a week.* Fall term. Professor Simpson.

46. Real Property.—A continuation of course 45. *Three hours a week.* Winter term. Professor Simpson.

47. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

48. Roman Law.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

49. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Mr. Worster.

50. Sales.—A continuation of course 49. *Two hours a week.* Winter term. Mr. Worster.

51. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Mr. Worster.

52. Suretyship.—A continuation of course 51. *Two hours a week.* Winter term. Mr. Worster.

53. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

54. Torts.—A continuation of cuorse 53. *Three hours a week.* Winter term. Professor Walz.

55. Torts.—A continuation of course 54. *Two hours a week.* Spring term. Professor Walz.

56. What to do in Court.—Lectures. *About ten hours.* Spring term. Mr. Chief Justice Emery.

57. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Mr. Worster.

THE MAINE AGRICULTURAL EXPERIMENT STATION

THE STATION STAFF

ADMINISTRATION	CHARLES D. WOODS, Sc. D.	*Director*
	BLANCHE F. POOLER	*Stenographer*
	RALPH K. JONES, B. S.	*Librarian*
	CHARLES J. DUNN	*Treasurer*
	GRACE M. COLBURN	*Bookkeeper*
BIOLOGY	RAYMOND PEARL, PH. D.	*Biologist*
	FRANK M. SURFACE, PH. D.	*Associate*
	MAYNIE R. CURTIS, A. M	*Assistant*
	WALTER ANDERSON	*Poultryman*
	LOTTIE E. McPHETERS	*Computer*
CHEMISTRY	JAMES M. BARTLETT, M. S.	*Chemist*
	HERMAN H. HANSON, M. S.	*Associate*
	ALBERT G. DURGIN, M. S.	*Assistant*
	ALVIN K. BURKE, B. S.	*Assistant*
	RAYMOND P. NORTON, B. S.	*Assistant*
ENTOMOLOGY	OSKAR A. JOHANNSEN, PH. D.	*Entomologist*
	EDITH M. PATCH, B. S.	*Associate*
	ALICE W. AVERILL	*Laboratory Assistant*
HORTICULTURE	WALTER W. BONNS, B. S.	*Associate Horticulturist*
PLANT PATHOLOGY	WARNER J. MORSE, M. S.	*Pathologist*
	CHARLES E. LEWIS, PH. D.	*Associate*
	JOHN SUMMERS	*Laboratory Assistant*
	HARRY ALEXANDER	*Laboratory Assistant*
HIGHMOOR FARM	WELLINGTON SINCLAIR	*Superintendent*
ROYDEN L. HAMMOND		*Seed Analyst and Photographer*
HENRY A. MILLETT		*Meteorological Observer and Janitor*

ESTABLISHMENT OF THE STATION

The Maine Fertilizer Control and Agricultural Experiment Station, established by Act of the Legislature approved March 3, 1885, began its work in April of that year in quarters furnished by the College. After the Station had existed for two years, Congress passed what is known as the Hatch Act, establishing agricultural experiment stations in every state. This grant was accepted by the Maine Legislature by an Act approved March 16, 1887, which established the Maine Agricultural Experiment Station as a department of the University. The reorganization was effected in June, 1887, but work was not begun until February 16, 1888. In 1906 Congress passed the Adams Act for the further endowment of the stations established under the Hatch Act.

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 8) composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, and the State Dairyman's Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station, and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1909-1910 is about $45,500; $15,000 of which comes from the Hatch fund; $15,000 from the Adams fund; $9,000 from State appropriations for feeding stuff inspection, fertilizer inspection, food and drug inspection and seed inspection; $4,500 from State appropriation for printing; $1,000 from the United States Department of Agriculture for carrying on coöperative experiments with poultry; and about $1,000 from miscellaneous sources.

THE OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants

and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Experiment Station can undertake from the Adams Act fund is more restricted and can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 26. The Station is well equipped in laboratories and apparatus, particularly in the lines of chemical, entomological, horticultural, pomological, vegetable pathological, and poultry investigations. Its poultry plant is probably the most complete of that of any experiment station in the country. It has extensive collections illustrating the botany and entomology of the state. It has a library of about 3,000 volumes, chiefly agricultural and biological journals, and publications of the various experiment stations.

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn and other farm crops." The farm is situated in the counties of Kennebec and Androscoggin and largely in the town of

Monmouth. It is on the Farmington Branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor," is on the farm.

The farm contains 225 acres, about 200 of which are in orchards, fields and pastures. There are in the neighborhood of 3,000 apple trees upon the place which have been set from 10 to 20 years. Fields that are not in orchards are well adapted to experiments with corn, potatoes, and similar general farm crops. The house is two-story with a large wing and contains about 15 rooms. It is well arranged for the Experiment Station offices and for the home of the farm superintendent. The barn is large, affording storage for hay and grain. The basement, which was formerly used for cattle, offers storage for apples, potatoes and roots.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, orchard and field experiments, poultry investigations, and entomological research. Some of these are in co-operation with bureaus of the United States Department of Agriculture.

INSPECTIONS

The inspection of food and drugs, the inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, the inspection of agricultural seeds, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters. The cost of the inspections is borne by a state appropriation, and the examination of chemical glassware by a charge for calibration.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are printed as Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent to farmers whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars and similar fleeting publications. From 20 to 30 are published each year and are sent to different addresses according to the nature of the subject matter.

On request the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

COMMENCEMENT

The Commencement Exercises of 1910 were as follows:

Sunday, June 5: Baccalaureate Address, by Rev. Frederick A. Bisbee, D. D., of Boston.

Monday, June 6: University Convocation, including reports of departments, and student enterprises, and the awarding of prizes; Class Day exercises; President's Reception.

Tuesday, June 7: Reception by the various fraternities; Alumni Luncheon; Alumnæ Luncheon; Phi Kappa Phi Initiation.

Wednesday, June 8: Commencement Address, by Edward Howard Griggs, L. H. D., of Montclair, N. J.; Commencement Dinner; Business Meeting of the Alumni Association; Commencement Ball.

DEGREES CONFERRED

College of Arts and Sciences

Leroy Winfield Ames, B. A. (Biology) ..... Bangor
Wales Henry Andrews, B. S. (English) ..... Middleboro, Mass
Frances Elizabeth Stanislaus Arnold, B. A. (Romance Languages) Orono
Emery Ray Bowdoin, B. S. (Economics) ..... Bucksport
Jennie Christianna Brown, B. S. (English) ..... Orono
Grover Trites Corning, B. S. (Economics) ..... Lynn, Mass.
Charles Liguori Graham B. S. (Mathematics) ..... Brooklyn, N. Y.
W. Warren Harmon, B. S. (Economics) ..... Old Orchard
Daniel Russell Hodgdon, B. A. (Physics) ..... Gorham
George Crosby Howard, B. A. (Greek) ..... Orono
Chester Cleveland Johnson, B. S. (Mathematics) ..... Portland
Edith Luella Jordan, B. A. (Romance Languages) ..... Old Town
Gladys Emma Kavanah, B. S. (Mathematics) ..... Bangor
Joseph Sylvester Keating, B. S. (Economics) ..... Red Beach
Ernest Lamb, B. S. (Economics) ..... Utica, N. Y.

Edwin Randolph Morgan, B. S. (Economics).....Sangerville
Franklin William Pettey, B. A. (Biology).....Fall River, Mass.
Geneva Alice Reed, B. A. (Mathematics).....Orono
August Herman Theodore Schierloh, B. A. (German)...Brooklyn, N. Y.
Oliver Fisk Sevrens, B. S. (Biology).....North Woburn, Mass.
Frank Elwyn Southard, B. A. (Economics).....Auburn
Winthrop Hamor Stanley, B. A. (Education).....Hull's Cove
Lenora Ellen Taft, B. A. (Latin).....Boston, Mass.
James Irving Travis, B. S. (Economics).....Machiasport
George Arthur Wakefield, B. A. (Biology).....Andover

College of Agriculture

William Clarke Bagg, B. S. in Forestry.....Utica, N. Y.
Robert Bacon Cruickshank, B. S. in Forestry.....Akron, Ohio
Fred Dumont Davis, B. S. in Forestry.....Brooks
Frank Eugene Fortier, B. S. in Agriculture.....Turner Center
Albert Kinsman Gardner, B. S. in Agriculture.....Rockland
Leroy Whittier Gardner, B. S. in Forestry.....Dennysville
Marshall Everett Reed, B. S. in Forestry.....Roxbury
George Albert Stuart, B. S. in Agriculture.....Calais
Herman Pittee Sweetser, B. S. in Agriculture.....Cumberland Center
George Sabine Wadsworth, B. S. in Agriculture.....Eastport
William Hiram Wentworth, B. S. in Forestry....Summersworth, N. H.

College of Pharmacy

Walter Melville Chase, B. S. in Pharmacy.....Bangor
Frederic Libby Davis, Ph. C.....South Berwick
Fred Helgesen, Ph. C.....Newport, R. I.
Royce Brewster Josselyn, Ph. C.....South Hanson, Mass
George Campbell Ward, Ph. C.....Kennebunk

College of Technology

George Frank Barron, B. S. in Electrical Engineering.....Orono
James Edmund Battles, B. S. in Electrical Engineering.....Frankfort
Wallace Brownell Baylies, B. S. in Civil Engineering
New Bedford, Mass.
Frederick Rowe Bigney, B. S. in Electrical Engineering.....Greenville
Roy James Bird, B. S. in Chemistry.....South Paris
Lester Morse Bragg, B. S. in Civil Engineering.....Stockton Springs
Herbert Putnam Bruce, B. S. in Civil Engineering.....Lynn, Mass.

Alfred Kimball Burke, B. S. in Chemistry.....Kennebunk
Vaughn Russell Chadbourne, B. S. in Electrical Engineering
Mattawamkeag
Alfred Blanchard Chandler, B. S. in Electrical Engineering
Yarmouthville
Harold Linscott Clifford, B. S. in Civil Engineering.....Orono
Raymond Thurber Cole, B. S. in Mechanical Engineering..
South Portland
John Lambert Collins, B. S. in Electrical Engineering.....Gardiner
William Everett Congdon, B. S. in Electrical Engineering.....Portland
Frederick Willis Conlogue, B. S. in Electrical Engineering.....Houlton
Horace Jewett Cook, B. S. in Civil Engineering.....Waterville
Ralph Willis Crocker, B. S. in Electrical Engineering.....Bangor
Chester Goodman Cummings, B. S. in Mechanical Engineering
Vanceboro
James Murchie Eaton, B. S. in Electrical Engineering.....Princeton
Malcolm Edward Fassett, B. S. in Civil Engineering.....Woodfords
Charles Henry Fenn, B. S. in Civil Engineering.....Portland
Kent Richard Fox, B. S. in Chemistry.....Bangor
Charles Melville Fulton, B. S. in Civil Engineering
Effingham Falls, N. H.
Carl Joseph Gooch, B. S. in Civil Engineering.....Biddeford
George Percy Goodrich B. S. in Electrical Engineering.....Phippsburg
Clifton Allison Hall, B. S. in Electrical Engineering.....Brewer
Roy Otis Hatch, B. S. in Chemistry.....Orono
Weston Milliken Hicks, B. S. in Civil Engineering.....Portland
Ralph Everett Hobbs, B. S. in Electrical Engineering.....Lynn, Mass.
Rupert A. Jellison, B. S. in Chemistry.....Bar Harbor
Charles Augustus Johnson, B. S. in Mechanical Engineering
Waltham, Mass.
Harvey Herbert Jordan, B. S. in Civil Engineering.....Waltham
Charles Clayton Ketchum, B. S. in Civil Engineering.....Ashland
Herman Winslow Kyes, B. S. in Electrical Engineering...Ipswich, Mass.
Yuen Foo Leong, B. S. in Electrical Engineering
Sun Dong, Canton, China
Albert Edwin Libby, B. S. in Civil Engineering.....Portland
Philip Henry Littlefield, B. S. in Mechanical Engineering.....Portland
Roby Perkins Littlefield, B. S. in Chemistry.....Ogunquit
Austin Louis Maddox, B. S. in Civil Engineering.....Ellsworth
Frank Edmund Merriam, B. S. in Mechanical Engineering....Skowhegan

Walter Scott Merrill, B. S. in Civil Engineering.....Skowhegan
Arthur Scudder Moore, B. S. in Electrical Engineering
West Lynn, Mass.
Raymond Pratt Norton, B. S. in Chemistry.....Patten
Allen Edson Oak, B. S. in Civil Engineering.....Caribou
John Neal Philbrook, B. S. in Civil Engineering.....Woodfords
Charles Augustus Cushman Porter, B. S. in Civil Engineering....Bangor
Charles Oland Pratt, B. S. in Civil Engineering....West Medford, Mass.
Vinton Royal Ray, B. S. in Civil Engineering.....Auburn
Frederick Drummond Rogers, B. S. in Mechanical Engineering
Richmond
Joseph George Rose, B. S. in Civil Engineering.....Brooklyn, N. Y.
Harold Merton Royal, B. S. in Electrical Engineering.....Hermon
Edward Giddings Russell, B. S. in Civil Engineering.....Eastport
James Grindle Scales, B. S. in Chemistry.....Guilford
Philip Downing Simonton, B. S. in Mechanical Engineering
Yarmouthville
Charles French Smith, B. S. in Electrical Engineering.....Skowhegan
Edward Notley Snow, B. S. in Electrical Engineering.....Skowhegan
George Edwin Springer, B. S. in Electrical Engineering.....Portland
Isaac Maxwell Stover, B. S. in Electrical Engineering.....Orono
Charles Henry Tucker, B. S. in Civil Engineering.....Orono
Harold Edward Walker, B. S. in Civil Engineering.....Sabattus
George Alexander Wallace, B. S. in Civil Engineering.....Portland
George Albert Webster, B. S. in Electrical Engineering.....Farmington
James Leon Whitmore, B. S. in Electrical Engineering.....North Haven
Amos Arthur Winters, B. S. in Civil Engineering.....Waterville
Harold Williams Wright, B. S. in Civil Engineering.....Reading, Mass.

College of Law

Frank Lyman Bass, LL. B. [B. A., Bowdoin College, 1907].....Bangor
Israel Harry Caplan, LL. B.....Portland
Carleton Doah, LL. B.....Belfast
Astor Elmassian, LL. B.....Lynn, Mass.
Oscar Harris Emery, LL. B.....Bar Harbor
Carl Folsom Getchell, LL. B. [B. A. Dartmouth College, 1905]..Newport
Herbert Leroy Grinnell, Jr., LL. B. [B. A. Bowdoin College, 1902]
Derry, N. H.
William Harrison Holman, LL. B.....Bangor
Lawrence Vivian Jones, LL. B.....Bangor

Charles Wendell Lemaire, LL. B.....Taunton, Mass.
Robie Lawton Mitchell, LL. B. [B. A., University of Maine, 1907]
West Newfield
Bertram Everett Packard, LL. B. [B. A., Bates College, 1900]
Litchfield
Fred Edgecomb Richards Piper, LL. B. [B. A. Bowdoin College, 1906]
Portland
Elisha Shaw Powers, LL. B.....Houlton
Bertrand Edwin Spencer, LL. B. [B. A., Dartmouth College, 1906]
Lenox, Mass.
Henry Nathan Taylor, LL. B.....Portland
Christopher Toole, Jr., LL. B.....Bangor

ADVANCED DEGREES

Honorary

Edward Harward Blake, LL. D.....Bangor

IN COURSE

Master of Science

William Archibald Brown, B. S. A. [Ontario Agric. College] 1906, (Agriculture) .....Orono
Edith Marion Patch, B. S. [University of Minnesota] 1901, (Biology)
Orono

Master of Laws

Edward William Bridgham, LL. B., 1909.....Bridgton
Archer Rawson Greeley.....Webster, Mass.
Henry Burt Montague, LL. B. (Cornell University), 1895
Southbridge, Mass.
Frank Howard Purington, LL. B., 1908 [B. A., Bates College, 1896]
Portland
William Marston Weeks, LL. B. (Cumberland University, 1908), 1909
Lebanon, Tenn.

Civil Engineer

Paul Leonard Bean, B. S. in Civil Engineering, 1904.....Orono
George Estyn Goodwin, B. S. in Civil Engineering, 1901...Helena, Mont.
Arthur Russell Lord, B. S. in Civil Engineering, 1907.....Urbana, Ill.
Herman Stephen Martin, B. C. E., 1896.....Twin Falls, Idaho

ELECTRICAL ENGINEER

Elmer Josiah Wilson, B. S. in Electrical Engineering, 1907..Lynn, Mass.

MECHANICAL ENGINEER

William Elmer Stone, B. S. in Mechanical Engineering, 1907
Hartford, Conn
Porter LaForest Swift, B. S. in Mechanical Engineering, 1907
Hartford, Conn

CERTIFICATES IN THE SCHOOL COURSE IN AGRICULTURE

Raymond Murray Payson.....Rockland
Philip Otto Pillsbury.....Rangeley
Curtis Taylor.....Springvale
Warren Dudley True.....Litchfield

CERTIFICATE IN THE TEACHERS' COURSE IN AGRICULTURE

Herbert Staples Hill, B. A. (Bowdoin), 1905.....Westbrook

PRIZES AWARDED

Kidder Scholarship, Charles Brown Cleaves, Portland.

Western Alumni Association Scholarship, Raymond Alden Jackson, Harrison.

Junior Exhibition Prize, George Henry Howe, Jr., Caribou.

Sophomore Declamation Prize, Carl Shurtz Cleaves, Bar Harbor.

Franklin Danforth Prize, Herman Pittee Sweetser, Cumberland Center.

Pittsburg Alumni Association Scholarship, Charles Drummond Rea, Southwest Harbor.

Kennebec County Prize, Isaac Maxwell Stover, Orono.

Hon. E. B. Winslow Prize, Warren Dudley True, Litchfield.

Walter Balentine Prize, Albert Davis Conley, Woodfords.

The highest standing obtained by a member of the class of 1910 for the four years course was made by Harold Merton Royal, Hermon.

The Class of 1908 Commencement Cup, which is awarded each year to the class having the largest percentage of its membership back for Commencement, was won in 1909 by the classes of 1872 and 1873, both having the same per cent. back.

In 1910 the cup was won by the class of 1875.

The cup presented by the Senior Skulls to that Fraternity which has, during the year, maintained the highest average in scholarship, was awarded in 1910 to Beta Theta Pi.

APPOINTMENTS

Speakers at the Junior Exhibition, June 1, 1910

Frederick Lincoln Chenery, Jr., Wayne; Annie Hoadley Gilbert, Old Orchard; George Henry Howe, Jr., Caribou; Charles Drummond Rea, Southwest Harbor; Benjamin Otis Warren, Fryeburg.

Speakers at the Sophomore Prize Declamation Contest, December 3, 1910

Miretta Lydia Bickford, Skowhegan; Carl Schurz Cleaves, Bar Harbor; Margaret Flint, Port Deposit, Md.; Philip Garland, Old Town; Philip Rodney Hussey, Patten; Lyman Atwell McKenney, Saco; Clyde Gilman Morrill, Wakefield, Mass.; Newell Bryant Whitcomb, Bangor.

Members of the Phi Kappa Phi

Vaughn Russell Chadbourne, Mattawamkeag; George Percy Goodrich, Phippsburg; Charles Liguori Graham, Broklyn, N. Y.; Herbert Leroy Grinnell, Brewer; Harvey Herbert Jordan, Waltham; Roby Perkins Littlefield, Ogunquit; Austin Louis Maddox, Ellsworth; Walter Scott Merrill, Skowhegan; Franklin William Pettey, Fall River, Mass.; Harold Merton Royal, Hermon; Oliver Fisk Sevrens, North Woburn, Mass.; Bertrand Edwin Spencer, East Norwich, L. I.

Robie Lawton Mitchell, of West Newfield, was elected to membership with the class of 1907, and he is also entitled to an election with the class of 1910 in the College of Law.

Seniors Receiving General Honors

Vaughn Russell Chadbourne, Mattawamkeag; Frederick Willis Conlogue, Houlton; George Percy Goodrich, Phippsburg; Merton Taylor Goodrich (1909), Bingham; Charles Liguori Graham, Brooklyn, N. Y.; Harvey Herbert Jordan, Waltham; Roby Perkins, Littlefield, Ogunquit; Austin Louis Maddox, Ellsworth; Walter Scott Merrill, Skowhegan;

Franklin William Pettey, Fall River, Mass.; Marshall Everett Reed, Roxbury; Harold Merton Royal, Hermon; Oliver Fisk Sevrens, North Woburn, Mass.

From the College of Law

Herbert Leroy Grinnell, Jr., Brewer; Robie Lawton Mitchell, West Newfield; Bertrand Edwin Spencer, East Norwich, L. I.

To be Reported to Adjutant General U. S. Army for Publication in the U. S. Army Register and to the Adjutant General State of Maine

George Arthur Wakefield, Andover; Harold William Wright, Brewer; John Neal Philbrook, Woodfords.

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agriculture, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ce. Civil Engineering, Ds. Domestic Science, Ec. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Hy. History, Lt. Latin, Ms. Mathematics, Me. Mechanical Engineering, Pm. Pharmacy, Pl. Philosophy, Ps. Physics, Rm. Romance Language.

GRADUATE STUDENTS

Bradford, Frederick Charles, B. S., Ag. Harvard University, 1908	*Stillwater*	Stillwater
Brann, Bertrand French, B. S., Ch. University of Maine, 1909	*Bangor*	Bangor
Burghart, Lloyd Meeks, B. A., Ch. Lake Forest College, 1906	*Orono*	Pine St.
Buswell, Arthur Moses, B. A., Ch. University of Minnesota, 1910	*Orono*	40 Main St.
Curtis, Maynie Rose, B. A., M. A., Pl. University of Michigan, 1905, 1908	*Mason, Mich.*	University Inn
Cutler, Frances Wentworth, B. A., Eh. Vassar College	*Bangor*	Bangor
Drew, Ernest Claude, B. S., Ps. University of Vermont, 1909	*Poultney, Vt.*	80 Main St.
Graham, Charles Liguori, B. S., Ms. University of Maine, 1910	*Brooklyn, N. Y.*	Θ X House
Kavanaugh, Gladys Emma, B. S., Ms. University of Maine, 1910	*Bangor*	Bangor
Lorimer, Addison Benjamin, B. A., Eh. Colby College, 1888	*Bangor*	Bangor

Palmer, Wintha Rudolph, B. S., Ht. Oregon Agricultural College, 1909	*Dallas, Ore.*	Campus
Reed, Lowell Jacob, B. S., Ms. University of Maine, 1907	*Orono*	College St.
Royal, Harold Merton, B. S., Ee. University of Maine, 1910	*Hermon*	Main St.
Wilbur, Walter Edmund, B. S., Ms. University of Maine, 1908	*Pembroke*	86 Main St.

SENIORS

Adams, Alfred Sanford, Ms.	*Newport*	Δ K House
Atwood, Albert Samuel, Ee.	*Phillips*	Φ H K House
Barker, Jack Sears, Me.	*Calais*	Δ T Δ House
Barton, Eben Robert, Ce.	*Palmer, Mass.*	Θ X House
Bartow, William Edgar, Ch. Eng.	*Utica, N. Y.*	Σ X House
Bearce, George Dunham, Fy .	*Auburn*	B Θ Π House
Blaisdell, Allen Holt, Me.	*Bangor*	57 Fifth St.
Blaisdell, Guy Marble, Ee.	*Farmington*	University Inn
Blanchard, Alfred Michel, Ce.	*Southbridge, Mass.*	Θ X House
Brown, Florence Evelyn, Hy.	*Old Town*	Old Town
Buck, Raymond Wilbur, Ce.	*Monticello*	Σ X House
Burgess, Harold Brainerd, Ce.	*Rockland*	Δ T Δ House
Carle, Harry Pennell, Ce.	*Portland*	Φ Γ Δ House
Chapman, George Bunker, Me.	*Holyoke, Mass.*	Φ H K House
Chenery, Frederick Lincoln, Jr., Ee.	*Wayne*	Φ K Σ House
Conley, Albert Davis, Ch.	*Woodfords*	Pine St.
Cooper, Parker Messer, Ce.	*Jefferson*	101 Oak Hall
Cousins, Irene, Hy.	*Old Town*	Old Town
Cummings, Nathan Clifford, Ee.	*Gorham*	Φ Γ Δ House
Cushman, William Parsons, Ce.	*West Pownal*	Δ K House
Davis, Raymond Earle, Ce	*Orono*	College St.
Davis, Raymond Webber, Ec.	*Guilford*	Φ Γ Δ House
Day, Letitia Elizabeth, Lt.	*Brewer*	Brewer
Day, Ralph Roscoe, Ee.	*Cornish*	Φ K Σ House
Derby, Frank Holliday, Ce.	*Orono*	A T Ω House
Dinsmore, James Leigh, Ec.	*Hallowell*	Φ H K House
Doore, Clarence Freeland, Me.	*Dover*	Δ T Δ House
Dwinal, Olaf Windsor, Ce.	*Auburn*	Θ X House
Eaton, Arthur Clement, Ch. Eng.	*Wenham, Mass.*	Σ X House

Everett, Jasper Willard, Ee.	*Norway*	Θ X House
Fitch, LeRoy Allan, Ce.	*East Sebago*	Δ K House
Folley, Delton Wharff, Ee.	*Sangerville*	University Inn
Geery, Louis Duncan Tallman, Ch.	*Katahdin Iron Works*	Φ Π K House
Gerrish, Charles Samuel, Ce.	*Kittery Point*	Park St.
Gifford, George Washington, Ee.	*Dennysville*	Σ Δ E House
Gilbert, Annie Hoadley, Lt.	*Old Orchard*	Mt. Vernon House
Goodwin, Alexander Willard, Ee.	*Vanceboro*	Δ T Δ House
Greenwood, Ralph Harrison, Ee.	*Presque Isle*	Φ Π K House
Hamlin, Dunton, Ce.	*Orono*	Main St.
Hammond, Avery Carleton, Me.	*Orono*	Main St.
Harris, Hiram Elmer, Ee.	*West Minot*	32 North Main St.
Hart, Ashton Halsted, Ce.	*Presque Isle*	K Σ House
Haskell, William Oleson, Ch. Eng.	*Westbrook*	Φ Γ Δ House
Hatch, Warren William, Me.	*Brooklyn, N. Y.*	North Main St.
Henderson, Robert Raymond, Ch. Eng.	*Madison*	110 Oak Hall.
Holmes, Ralph Maynard, Ps.	*Ellsworth*	Σ X House
Homans, Harry, Ce.	*No. Vassalboro*	Δ K House
Hooper, Irvin Frothingham, Ce.	*Lynn, Mass.*	Θ Π K House
Hosmer, George Lawrence, Me.	*Rockland*	Δ T Ω House
Howe, George Henry, Jr., Ce.	*Caribou*	Σ X House
Ingham, Harold William, Ce.	*Haverhill, Mass.*	Δ T Ω House
Jewett, John Nelson, Fy.	*Cherryfield,*	Σ X House
Jones, Roy Chandler, Ee.	*Gardiner*	103 Oak Hall.
Jones, Sidney Morrison, Ce.	*Bangor*	B Θ Π House
Keen, Lewis Albert, Ee.	*South Paris*	Φ Π K House
King, James Putman, Ee.	*Peabody, Mass.*	Θ E House
Kingsley, Ernest Roy, Ee.	*Yarmouthville*	Main St.
Leary, Arthur Joseph, Ce.	*Somersworth, N. H.*	Θ X House
Leavitt, George Clark, Bl.	*Norway*	202 Oak Hall
LeBaron, LeRoy Morse, Ee.	*West Wareham, Mass.*	212 Oak Hall
Lee, Horace Newton, Bl.	*Greenwood, Mass.*	204 Oak Hall
Lord, George Lester, Ce.	*South Berwick*	Δ K House
Lycette, Cecil Leland, Ce.	*Houlton*	211 Oak Hall
McCarthy, Maurice Franklin, Ch.	*Lewiston,*	K Σ House
McManus, Margaret Ellen, Eh.	*Bangor*	Mt. Vernon House
Markle, Bert Christian, Ec.	*Northampton, Mass.*	Σ A E House
Maxcy, Everett Heseltine, Ec.	*Gardiner*	Σ A E House
Maxwell, Edwin Clayton, Ce.	*Palmer, Mass.*	72 Main St.
Merrell, James Raymond, Ce.	*North Adams, Mass.*	Δ T Δ House

Merrill, Dimon Emery, Ee.	*Alfred*	201 Oak Hall
Morrison, Freeland John, Ch.	*Bangor*	Σ A E House
Murphy, Cyrus William, Jr., Ee.	*West Kennebunk*	Oak Hall
Nason, Fred Warner, Ch. Eng.	*Haverhill, Mass.*	A T Ω House
Oak, Donald Prescott, Ce.	*Bangor*	A T Ω House
Patch, Clifford, Ch. Eng.	*Bangor*	Bangor
Patterson, Ralph Edwin, Ce.	*Bangor*	A T Ω House
Peaslee, Dana Newton, Ce.	*Lynn, Mass.*	Main St.
Peckham, Wentworth, Fy.	*Lewiston*	B Θ Π House
Phillips, George Alfred, Ce.	*Westbrook*	A T Ω House
Phinney, Chester Squire, Rm.	*Pawtucket, R. I.*	Θ X House
Pickup, Herbert Wilfred, Ec.	*Ipswich, Mass.*	Θ X House
Pinkham, Charles Joseph, Me.	*Farmington*	211 Oak Hall
Pinkham, Niles Cassius, Fy.	*Portland*	Φ Γ Δ House
Pond, Ralph Benjamin, Ee.	*Bangor*	Φ Γ Δ House
Prentiss, Mildred Louise, Gm.	*Brewer*	Mt. Vernon House
Rea, Charles Drummond, Ce.	*Southwest Harbor*	Φ K Σ House
Robinson, John Tyler, Ee.	*Sherman Station*	311 Oak Hall
Russell, Harl, Ce.	*Dexter*	103 Oak Hall
Sargent, Harold Rodolph, Ce.	*Sedgwick*	Θ E House
Sawtelle, Philip Perry, Me.	*Augusta*	1 Main St.
Sawyer, Frank Sleeper, Ce.	*Sabattus*	Θ X House
Scales, Nelson Ned, Ec.	*Guilford*	Φ Γ Δ House
Sisson, Elmer Allen, Ee.	*So. Middleboro, Mass.*	212 Oak Hall
Smith, Nelson Ernest, Ee.	*Peabody, Mass.*	Θ E House
Smith, Russell, Ag.	*Auburn*	K Σ House
Strout, Philip Stanwood Ce.	*So. Portland*	Θ E House
Sumner, Merton Rogers, Ce.	*South Paris*	Φ K Σ House
Taylor, Florence Anna, Ms.	*Hermon*	Mill St.
Thomas, Haywood Stanley, Eh.	*Milo*	312 Oak Hall
Thompson, Lynwood Burkett, Fy.	*Belfast*	101 Oak Hall
Tobey, Elmer Robert, Pm.	*Norridgewock*	A T Ω House
Varney, George Newton, Me.	*East Rochester, N. H.*	Campus
Verrill, Albert, Ch. Eng.	*Westbrook*	Δ K House
Vickery, Harry Whitman, Ee.	*East Auburn*	Φ H K House
Waite, Sumner, Ec.	*Portland*	Φ Γ Δ House
Wakefield, Oscar Abel, Ce.	*Andover*	Φ K Σ House
Walker, Ernest Thaxter, Me.	*Biddeford*	Φ K Σ House
Warren, Benjamin Otis, Hy.	*Fryeburg*	B Θ Π House
Warren, John Newton, Me.	*Orono*	Θ X House
Wentworth, George Jacob, Ag.	*Kennebunk Beach,*	Φ H K House

Whitney, Benjamin Burbank, Ce.	*Strong*	Σ X House
Whittier, Earle Ovando, Ch. Eng.	*Farmington*	Θ E House
Wilson, Winthrop Field, Ce.	*Portland*	Σ X House
Wood, Harold Grinnell, Fy.	*Hallowell*	Σ Λ E House

JUNIORS

Ash, John Emmons, Ee.	*Bar Harbor*	Θ E House
Averill, Helen Willard, Ch.	*Milltown*	Mt. Vernon House
Ayer, Elmore, Me.	*Dorchester, Mass.*	Λ T Ω House
Bartlett, Emily Mary, Bl.	*Orono*	College St.
Benjamin, Charles Smith, Ch.	*Old Town*	Old Town
Benson, Arthur Wilhelm, Ec.	*Wellesley, Mass.*	Δ T Δ House
Burch, Joseph Francis, Ed.	*Biddeford Pool*	No. Brewer
Buzzell, Robert Loring, Ec.	*Old Town*	Δ T Δ House
Carleton, Edward Frazier, Rm.	*So. Groveland, Mass.*	Δ K House
Cavanaugh, Charles Alton, Ag.	*Portland*	107 Oak Hall
Center, Irving Emory, Me.	*Kingston, Mass.*	Δ K House
Chapman, Harry Wey, Ee.	*Harrison*	54 N. Main St.
Chase, Alden, Ee.	*Bryant's Pond*	Θ X House
Clapp, Alma Eliza, Ms.	*Brewer*	Brewer
Cleaves, Carl Schurz, Ce.	*Bar Harbor*	Φ Γ Δ House
Cleaves, Charles Brown, Ee.	*Portland*	Φ Γ Δ House
Cobb, Frank Collins, Ee.	*Livermore Falls*	Σ Λ E House
Coffin, Celia May, Eh.	*Bangor*	Mt. Vernon House
Crabtree, Alfred Evans, Ee.	*Hancock*	K Σ House
Crosby, Harry Lawrence, Ce.	*Portland*	K Σ House
Darrell, Franklin Lloyd, Ce.	*Brooklyn, N. Y.*	Β Θ Π House
Deering, Arthur Lowell, Ag.	*Bridgton*	Φ K Σ House
Dunlap, Clarence, Ag.	*Farmington*	1 Park St.
Dyer, Samuel, Ce.	*Attleboro, Mass.*	102 Oak Hall
Eastman, Henry Harlan, Ce.	*Limerick*	Λ T Ω House
Emerson, Walter Bradbury, Me.	*Biddeford*	Park St.
Estabrooke, Carl Bertrand, Eh.	*Orono*	Main St.
Estabrook, Marion Corthell, Ds.	*Orono*	Main St.
Faulkner, Harold Clark, Me.	*Lynn, Mass.*	Θ E House
Fisher, Herbert Leir, Ce.	*Charlotte*	Λ T Ω House
Garland, Philip, Me.	*Old Town*	Φ Γ Δ House
George, Clifford Henry, Ee.	*East Orrington*	Φ Γ Δ House
Goodnow, Alden Church, Ms.	*Fairhaven, Mass.*	Β Θ Η House

Gordon, Robert James, Ee.	*Bangor*	Bangor
Gould, Maynard Sumner, Ee.	*Camden*	Φ H K House
Grant, Charles Harold, Gm.	*Bangor, R. F. D. 3*	Brewer
Gray, William Melvin, Ag.	*Houlton*	Φ K Σ House
Hall, Louise Frances, Eh.	*Belfast*	Mill St.
Haskell, Benjamin, Ee.	*Westbrook*	Φ Γ Δ House
Hebard, William Everett, Ed.	*Southbridge, Mass.*	32 N. Main St.
Hinkley, Harry Wendell, Ce.	*Rangeley*	16 Main St.
Hopkinson, Ralph Stimson, Ee.	*Saco*	B Θ Π House
Houghton, Lloyd Everett, Fy.	*Lee*	Φ K Σ House
Hussey, Philip Rodney, Fy.	*Patten*	Φ K Σ House
Hussey, Robert Elliott, Ch.	*Portland*	Φ H K House
Jackson, James Foster, Ee.	*Jefferson*	Σ A E House
Jacobs, Lester Warner, Ce.	*Rockland, Mass.*	Θ E House
Jones, Austin Whitt'er, Ag.	*Bangor*	K Σ House
Jones, Fred Ruel, Ag.	*Mercer*	28 Pine St.
Jones, Lillian Curtis, Ms.	*Bangor*	Bangor
Jones, Maurice Daniel, Ag.	*Unity*	Φ H K House
Kelley, Margaret June, Gm.	*Bangor*	Mt. Vernon House
Kent, Benjamin Calvin, Me.	*Stillwater*	Θ E House
King, George Edward, Jr., Ce.	*Bethel*	Θ X House
Lancaster, Frank Hodgkins, Ce.	*Presque Isle*	Φ H K House
Lilly, Walter Harrison, Ce.	*Woolwich*	Σ X House
Linn, Tse-Sheng, Ec.	*Hong Kong, China,*	College St.
Macdonald, Roger Winchester, Ce.	*Peabody, Mass.*	Θ X House
McDonald, Warren, Ce.	*Portland*	Φ Γ Δ House
McKeen, Ellis Wyman, Ag.	*Fryeburg*	B Θ H House
McKenney, Lyman Atwell, Ee.	*Saco*	K Σ House
Mariner, Hazel Folsom, Eh.	*Milford*	Milford
Merrill, Ruth, Hy.	*Auburn*	100 Main St.
Miller, William James Henry, Fy.	*South Berwick*	Φ H K House
Mountfort, Oscar William, Ce.	*Nashua, N. H.*	Φ K Σ House
Mullins, William, Ec.	*Cambridge, Mass.*	Θ X House
Murray, Walter Edward, Ee.	*Lynn, Mass.*	Θ X House
Newell, Charles William, Ee.	*Houlton*	Φ K Σ House
Nickels, Albert Mortimer, Me.	*Cherryfield*	Σ A E House
Nucci, James Francis, Rm.	*Orono*	Pine St.
Osborne, Atlee Burpee, Ce.	*Ft. Fairfield*	Θ E House
Parker, George Leavitt, Ag.	*Skowhegan*	A T Ω House
Parker, William Emery, Ee.	*Harrington*	K Σ House
Perkins, Walter Ezra, Ce.	*Old Town*	Old Town

Pinkham, Seymour Leroy, Ee.	*Portland*	Φ Η Κ House
Poole, James Plummer, Fy.	*Gloucester, Mass.*	Α Τ Ω House
Quimby, Sherman Leslie, Me.	*So. Brewer*	Park St.
Rand, Lynne Thomas, Ce.	*Unity*	Σ Χ House
Reid, Robert Clifford Henry, Ee.	*Bangor*	Φ Η Κ House
Rowe, Charles Winfield, Ag.	*South Paris*	Campus
Russell, Luther Sampson, Ag.	*Orono*	North Main St.
Russell, Mary Etta, Bl.	*Orono*	North Main St.
Savary, Warren Hapgood, Ce.	*East Wareham, Mass.*	Φ Η Κ House
Sawyer, Edward Eugene, Ch.	*Old Town*	Σ Χ House
Schrumpf, William Ernest, Ag.	*Farmington*	Δ Τ Δ House
Shorey, Ralph Oscar, Ce.	*Foxcroft,*	Park St.
Smiley, Leon Walter, Ce.	*Skowhegan*	Φ Γ Δ House
Smith, Montelle Chester, Ee.	*Old Town*	Θ Ε House
Southwick, William Alfred, Ee.	*West Peabody, Mass.*	Θ Ε House
Spear, Graham Brown, Ee.	*Springfield, Mass.*	Σ Α Ε House
Sturtevant, Arthur Leroy, Ag.	*Milo*	Campus
Sullivan, Charles Eugene, Me.	*Gorham, N. H.*	Σ Α Ε House
Sweetser, Harlan Hayes, Fy.	*Cumberland Center*	202 Oak Hall
Thompson, Harry Ernest, Ee.	*Bath*	Oak Hall
Towne, Harland Eugene, Ce.	*East Dover*	Park St.
Washburn, Dana Peabody, Ec.	*Calais*	Β Θ Π House
Webster, Ernest John, Fy.	*Farmington*	Σ Χ House
Weeks, Allen Henry, Me.	*Jefferson*	Forest St.
Winchester, Frank William, Ce.	*Nahant, Mass.*	Θ Χ House
Winn, Harold Earl, Ce.	*Dover, N. H.*	Δ Τ Δ House
Witham, Walter Remick, Ce.	*Madison*	Φ Κ Σ House
Woodberry, George Roundy, Ec.	*Beverly, Mass.*	Σ Α Ε House
Woodman, Carrie Luella, Ms	*Claremont, N. H.*	Mill St.
Woodward, Karl Douglas, Ch.	*Kingston, Mass.*	Κ Σ House
Worden, George Newton, Ag.	*Vanceboro*	Δ Τ Δ House
Worster, Helen Charlotte, Eh.	*Bangor*	Mt. Vernon House
Worthley, Henry Osgood, Hy.	*Lincoln*	Lincoln

SOPHOMORES

Allen, Blynne, Ag.	*Norway*	Φ Κ Σ House
Allen, Clifton Lowery, Ce.	*Mt. Vernon*	University Inn
Ames, Forrest Bertram, Eh.	*Bangor*	Bangor
Annable, Burleigh Ansel, Ce.	*Lynn, Mass.*	Θ Χ House
Ayer, Harold Francis, Ag.	*Haverhill, Mass.*	Θ Χ House

Ballou, William Rice, Ec.	*Bath*	Φ Γ Δ House
Bigelow, Elson Hartwell, Me.	*Brigton*	Κ Σ House
Bird, Maurice Cobb, Ce.	*Rockland*	Β Θ Π House
Blanchard, Franklin Roy, Ce.	*Beverly, Mass.*	Campus.
Bolton, Philip Sumner, Ch.	*Gorham*	Coburn Hall
Bradbury, Ira Miller, Ce.	*Gorham*	Φ Γ Δ House
Brean, Lloyd Francis, Ce.	*Lee*	Φ Κ Σ House
Brewer, Warren Grant, Ec.	*Peaks Island*	Φ Γ Δ House
Cannon, Arthur Hildreth, Me.	*Orono*	Orono
Carleton, John Harvey, Ce.	*South Berwick*	Α Τ Ω House
Chandler, Clifton Edward, Ec.	*Portland*	Φ Γ Δ House
Church, James Elwood, Ch.	*Gardiner*	Δ Τ Δ House
Clark, George Clarence, Ms.	*Portland*	309 Oak Hall
Clark, George Freeman, Ce.	*Tremont*	308 Oak Hall
Conners, Edward Warren, Ce.	*Great Works*	Great Works
Creeden, James Coharn, Ce.	*Lewiston*	Θ Χ House
Cronan, Mark Dennis, Ce.	*Middleton Mass.*	204 Oak Hall
Crossman, Mae Evelyn, Eh.	*Claremont, N. H.*	Mt. Vernon House
Davis, Oscar Henry, Me.	*North Berwick*	Κ Σ House
Dillingham, Winfield Presbury, Ce.	*Freeport*	Κ Σ House
Dyer, Guy Valentine, Fy.	*Calais*	Σ Χ House
Eales, Frank Henry, Ce.	*Vanceboro*	Δ Τ Δ House
Finkbeiner, Daniel Talbert, Ce.	*Clearfield, Penna.*	16 Bennock St.
Floyd, Raymond, Ce.	*Brewer*	Φ Κ Σ House
Getchell, Dennis, Ec.	*Limestone*	Β Θ Π House
Goodwin, Fred Gilman, Ee.	*Charleston*	32 No. Main St.
Groves, Walter Clyde, Ce.	*Camden*	Α Τ Ω House
Haines, Frank Warren, Ee.	*Dexter*	Β Θ Π House
Hamlin, Harold, Ec.	*Orono*	Φ Γ Δ House
Harriman, Royden Henry, Ee.	*Bangor*	Bangor
Hart, John Walter, Ag.	*Holden*	Σ Α Ε House
Harvey, Alice Josephine, Ds.	*Bangor*	Mt. Vernon House
Higgins, Thomas Carol, Ce.	*Bar Harbor*	Θ Ε House
Huggins, Leslie Mansfield, Me.	*Malden, Mass.*	Main St.
Huntington, Richard Thomas, Ag.	*Augusta*	Σ Α Ε House
Jackman, Percy Edward, Ee.	*Vanceboro*	Park St.
Jackson, Raymond Olden, Me.	*Harrison*	Stillwater
Jennison, Elwood Whitney, Me.	*Bangor*	Κ Σ House
Jones, Carrol Clair, Ec.	*Solon*	Φ Η Κ House
Jordan, Harry Gilman, Ce.	*Waltham*	209 Oak Hall
Kiernan, John Henry, Ce.	*Wareham, Mass.*	Φ Η Κ House

Kimball, Earle Nelson, Ee.	*Auburn*	305 Oak Hall
Knight, Carroll Morse, Ce.	*Cliftondale, Mass.*	209 Oak Hall
Littlefield, John Ce.	*Brewer*	University Inn
Lucas, Warren Stanhope, Ce.	*Foxcroft*	Δ T Δ House
Lutts, Carlton Gardner, Ch.	*Kittery*	Σ X House
McAlary, Allen Francis, Ce.	*Waterville*	A T Ω House
McCarthy, William Joseph, Ch.	*Lewiston*	Θ E House
Matthews, Frank, Ce.	*Guilford*	Θ E House
Merrill, Mildred Hastings, Ds.	*Auburn*	100 Main St.
Merrill, William Hammond, Ee.	*Bangor*	Σ A E House
Mitchell, William Johnston, Ce.	*Fairhaven, Mass.*	Δ K House
Nash, Harold Harlem, Ag.	*Camden*	Φ H K House
Norton, Carlos Everett, Ag.	*Cumberland Center*	Δ K House
Ober, John Larcom, Ee.	*Beverly, Mass.*	Σ A E House
Parsons, John Thomas, Ee.	*South Paris*	Pine St.
Phelps, Donald, Me.	*Robbinston*	North Main St.
Pilot, Michael, Ce.	*Auburn*	Bangor
Pinkham, Robert Arthur, Ee.	*Farmington*	311 Oak Hall
Platt, James Nelson, Ce .	*Abington, Conn.*	Oak Hall
Pope, Morrill Stuart, Ce.	*East Machias*	Φ Γ Δ House
Power, Richard Anderson, Ag.	*Portland*	Φ H K House
Richards, Harold, Ee.	*Belfast*	Δ K House
Richardson, Carroll Raymond, Ee.	*Oakland*	208 Oak Hall
Ricker, Elwyn Tristram, Ce.	*North Saco*	K Σ House
Rogers, Luther Barker, Ee.	*Patten*	K Σ House
Sampson, Albert Edward, Ch.	*Gorham*	Coburn Hall
Sansoucie, William, Rm.	*Southbridge, Mass.*	Θ X House
Savage, Ernest Thompson, Fy.	*Bangor*	Bangor
Sawtelle, Donald Wing, Ag.	*Orono*	Forest St.
Sawyer, Allan Frank, Ag.	*Milbridge*	B Θ Π House
Seekins, Leon Elroy, Ec.	*Skowhegan*	K Σ House
Shepard, Thomas Dudley, Fy.	*Wellesley Hills, Mass.*	Campus
Simpson, George Stevens, Ch.	*Old Town*	Old Town
Small, Nathan Houston, Ec.	*Belfast*	Δ K House
Smith, Frederick Edward, Ec.	*New Bedford, Mass.*	111 Oak Hall
Smith, Leon Campbell, Fy.	*Topsham*	Φ H K House
Spencer, Frank Foss, Ce.	*Berwick*	Σ X House
Stevens, Ansel Herbert, Ag.	*Norridgewock*	Main St.
Stone, Walter Christopher, Ch.	*Clinton, Mass.*	University Inn
Sullivan, Willis Edmund, Ee.	*Biddeford*	309 Oak Hall
Tabor, James Atwood, Jr., Ch.	*Corinna*	Campus

Talbot, Ralph Lee, Ee.	*Lewiston*	Φ H K House
Tilley, Glenwood Goding, Me.	*Ashland*	A T Ω House
Tipping, Charles Herbert, Me.	*Claremont, N. H.*	A T Ω House
Treat, Gladys Evelyn, Eh.	*Monroe, R. F. D.*	Mt. Vernon House
Tuck, Leon Sylvester, Ce.	*Lee*	Peters St.
Utecht, Mary Ellen, Gm.	*Topsham*	College St.
Wallace, John Clyde, Ce.	*Portland*	B Θ Π House
Wardwell, Hubert Maurice, Jr., Ee.	*Newport*	Φ H K House
Webb, Antoinette, Eh.	*Bangor*	Mt. Vernon House
Wescott, Clifford Walker, Ag.	*Patten*	K Σ House
Wetherbee, Ralph Wilbur, Ee.	*Hudson, Mass.*	Φ Γ Δ House
Wilson, Warren LeRoy, Ec.	*Houlton*	Δ T Δ House
Wing, Roscoe Adelbert, Ce.	*Old Town*	Θ E House

FRESHMEN

Abbott, Arthur Warren	*Portland*	Φ Γ Δ House
Ackley, Edward Preble	*Peaks Island*	Φ H K House
Adams, Harold Purington	*Bowdoinham*	Φ K Σ House
Ainsworth, Lester Johnson	*Attleboro, Mass.*	Θ E House
Albee, Guy Edwin	*Machias*	Θ X House
Allen, Charles Francis	*Medfield, Mass.*	Mill St.
Amadon, Arthur Franklin	*Boston, Mass.*	A T Ω House
Andrews, Robert Wilbur	*West Pembroke*	B Θ Π House
Anthony, Benjamin Bennett	*Wakefield, Mass.*	Σ X House
*Arbuckle, Thomas Lorraine	*Skowhegan*	Σ A E House
Atwood, Charles Raymond	*Rumford*	Σ A E House
Babb, George Wilford	*Portland*	Σ X House
Bartlett, Louise	*Orono*	College St.
Beale, Douglas Marsh	*Orono*	Peters St.
Bean, Philip Hanson	*Saco*	No. Main St.
Beaupre, Estelle Inez	*Bangor*	396 Hammond St., Bangor
Bigney, Edmund Scammon	*Greenville*	K Σ House
Billings, Welford Parsons	*East Eddington*	East Eddington
Bodwell, Joseph Henry	*Methuen, Mass.*	Σ A E House
Boothby, Everett Osgood	*Gorham*	K Σ House
Boothby, Ralph Hamilton	*Portland*	Σ X House
Brann, Margaret Eleanor	*Bangor*	Bangor
Bray, Paul DeCosta	*Turner*	B Θ Π House
Brown, Joseph Lewis	*Bar Harbor*	Φ H K House

* In partial standing.

Brown, Lewis John	*Gorham, N. H.*	Main St.
Brown, Olin Chellis	*Bar Harbor*	Φ Η Κ House
Buck, William Harold	*Ansonia, Conn.*	303 Oak Hall
Buzzell, Marion	*Old Town*	Old Town
Chalmers, Dwight Stillman	*Albion*	Oak Hall
Chapman, Fred Elton	*Lake Hermon*	208 Oak Hall
Chase, Charles Arthur	*Sebec Station*	Δ Τ Δ House
Chase, Edward Everett	*Bluehill*	Σ Χ House
Chase, Walter Roland	*Beverly, Mass.*	Σ Χ House
Clark, Hermon Richard	*Townsend, Mass.*	112 Oak Hall
Clifford, Ernest Alfred	*Brunswick*	Α Τ Ω House
Cobb, Harold Vernon	*Livermore Falls*	Σ Α Ε House
Coffey, Ralph Thompson	*So. Brewer*	Basin Mills
Cousins, Mary Longfellow	*Old Town*	Old Town
Coyne, Albert Leo	*Worcester, Mass.*	Δ Τ Δ House
Creese, Guy Talbot	*Danvers, Mass.*	Β. Θ Π House
Crimmin, Erlon Victor	*Winterport*	14 Bennoch St.
Crocker, Richard Foster	*Belfast*	Α Τ Ω House
Crowell, Harrison Philip	*So. Portland*	Θ Ε House
Daniels, Clyde Folsom	*Thomaston*	Φ Γ Δ House
Danforth, Stephen Paul	*Foxcroft*	Θ Χ House
Dinsmore, Harold Lee	*Franklin, Mass.*	Commons
Dore, Edward Albert	*Bangor*	Bangor
Eaton, Arthur Galen	*Bangor*	Κ Σ House
Ferguson, Albert Barnett	*New York, N. Y.*	Κ Σ House
Ferguson, Russell Sweetser	*New York, N. Y.*	Κ Σ House
Field, Leon Albion	*Biddeford*	Σ Α Ε House
Foster, David Albert	*Ellsworth Falls*	Oak Hall
Foster, Phillip	*Waterville*	Θ Χ House
Fowler, Ernest Eugene	*Hartford, Conn.*	Σ Α Ε House
French, Norman Richards	*Berlin, N. H.*	Θ Χ House
Fowler, Henry Winslow	*Ft. Fairfield*	Σ Χ House
Frohock, Joseph Atkinson	*East Boston, Mass.*	Σ Α Ε House
Gerrish, Harold Colby	*Haverhill, Mass.*	206 Oak Hall
Getchell, Edward Leonard	*Winslow*	Σ Α Ε House
Goodwin, Alleyn Maurice	*Saco*	Κ Σ House
Grace, William Wallace	*Wakefield, Mass.*	Σ Χ House
Grant, Charles Ephriam	*Winterport*	208 Oak Hall
Gren, Axel Henry	*Bangor*	206 Oak Hall
Grundy, Leslie Walton	*Solon*	College St.
Haggart, Alexander LeRoy	*Franklin, Mass.*	Commons

Hall, Ernest Melvin	*West Eden*	Φ K Σ House
Hall, Howe Wiggin	*Rockland*	Φ Γ Δ House
Hanson, Ernest Freeman	*Gorham*	Φ Γ Δ House
Harris, Arthur Newton	*Woodfords*	B Θ Π House
Harvey, Everett Burton	*Bar Harbor*	Φ H K House
Haskell, Theodore Winthrop	*Westbrook*	Φ Γ Δ House
Hayes, Alden Burgess,	*Bangor*	Σ A E House
Hettinger, Frederick Carle	*Roslindale, Mass.*	10 Pine St.
Higgins, Oswald Burnett	*Sewaren, N. J.*	K Σ House
Hirst, Charles Henry	*Welchville,*	Campus
Hobart, Aileene Browne	*Milford*	Milford
Hodgkins, Edward Marshall	*Dorchester, Mass.*	Φ Γ Δ House
Hodgkins, William Glidden	*Damariscotta*	Δ T Δ House
Hollywood, Clifford Edward	*Portland*	Δ T Δ House
Holway, Charles Josiah	*Madison*	Brewer
Hudson, Jam s Russell	*Winthrop*	B Θ Π House
Johnson, William Alonzo	*Bangor*	Commons
Jones, Chesley Claude	*Ashmont, Mass.*	Δ T Δ House
Jones, Frederic Sawtelle	*Augusta*	B Θ Π House
Jordan, Marion Luella	*Old Town*	Old Town
Junkins, John Norman	*Milford, N. H.*	301 Oak Hall
Kelly, Charles Merrill, Jr.	*Ipswich, Mass.*	Φ H K House
Ketchen, Ralph Cleon	*Great Works*	Great Works
Kimball, Maurice Downs	*Woodfords*	112 Oak Hall
Kimball, William Earle	*South Paris*	Φ K Σ House
King, Albert Lincoln	*South Paris*	Φ K Σ House
* King, Henry Augustus	*Peabody, Mass.*	Θ E House
King, Philip Henry	*South Paris*	Φ K Σ House
Kingsbury, Allen Williamson	*Medfield, Mass.*	Φ K Σ House
Leach, Luther Adelbert, Jr.	*Bar Harbor*	Δ T Δ House
Leavitt, Harry Ralph	*Portland*	Δ T Δ House
Lewis, Fred Justin	*Springfield, Mass.*	Peters St.
Loftus, Edward Michael	*Bangor*	Bangor
MacBride, Herbert Clayton Grover	*Easton*	B Θ Π House
McKenney, Charles Raymond	*Orono*	Penobscot St.
MacNeil, George Andrew	*Pawtucket, R. I.*	Θ X House
Makanna, Nicholas	*Bangor*	Bangor
Martin, Preston Hussey	*Ft. Fairfield*	Φ Γ Δ House
Martinelli, Mario	*Wareham, Mass.*	Mill St.
Mayo, Carroll King	*Waterville*	A T Ω House
Merrill, Paul Bemoth	*Augusta*	1 Park St.

* In partial standing.

Monohon, Paul Wheeler	*Biddeford, R. F. D. No. 4*	Commons
Morris, Frank Albert	*Old Town*	Old Town
Morse, Wilson Montgomery	*Waterford*	Φ K Σ House
Murray, Paul Elmer	*Skowhegan*	K Σ House
Newman, George Burgess	*Fryeburg*	K Σ House
Norcross, Fernando Treat	*Portland*	Δ K House
Olson, John Oscar	*Belfast*	Δ K House
Parks, Harry Francis	*Reading, Mass.*	308 Oak Hall
Patterson, Lyle Leach	*Newport*	Δ K House
Peaslee, Roy William	*Randolph*	Δ T Δ House
Pendleton, Mark	*Islesboro*	B Θ Π House
Perkins, Anna Belle	*Skowhegan*	College St.
Peters, Shenton Ashley	*Bangor*	Main St.
Philbrook, Philip Edwin	*Woodfords,*	A T Ω House
Pickard, Wilfred Brown	*Hopedale, Mass.*	Θ E House
Pierce, Clarence Cheney	*Berlin, N. H.*	Θ X House
Pray, John Leslie	*West Eden*	Θ E House
Rand, Ernest Abbott	*Portland*	Crosby St.
Randall, Harry Burnham	*Milford*	Milford
Rounds, Gerald Arlester	*Portland*	Φ H K House
St. Onge, Arthur Amos	*Dover*	Δ T Δ House
Sandberg, Carl Janander	*Wendell Depot, Mass.*	Σ A E House
Sherwood, Neil Carpenter	*Cherryfield*	Bennoch St.
Sinkinson, George Edward	*Somersworth, N. H.*	Σ X House
Smith, Frank Allen	*Jamaica Plain, Mass.*	Θ E House
Snow, Israel, Jr.	*Rockland*	Δ T Δ House
Stevens, Guy Herbert	*Auburn*	Θ X House
Stevens, Roland Earle	*Belfast*	A T Ω House
Stiles, Robert Mark	*Brooks*	Brewer
Stinchfield, Ruth	*Danforth*	Mt. Vernon House
Strong, Joseph William, Jr.	*Wilmington, Mass.*	Σ X House
Sturgis, David William	*Gorham*	Θ X House
Swift, Clarence Earle	*Auburn*	Θ X House
Teeling, Arthur Henry	*Bangor*	Commons
Thomas, Philip Webb	*Portland*	Crosby St.
Thompson, William Raymond	*Orono*	Margin St.
Towle, Horace Hamblen, Jr.	*Portland*	Φ Γ Δ House
Towner, Wayland Dean	*Somerville, Mass.*	Σ X House
True, Elmer LaForest	*Hope*	Φ H K House
Twitchell, Carl Elmer	*Patten*	Φ K Σ House

Wadleigh, John Shepherd	*Augusta*	Β Θ Π House
Walker, James Clifford	*Portland*	Peters St.
Ward, Willia Gordon	*Attleboro, Mass.*	Mill St.
Wark, William Lucas	*Windham*	Θ Ε House
Welch, Gerald Cushman	*Oakland*	Α Τ Ω House
Wescott, Chester Arthur	*Bar Harbor*	Φ Γ Δ House
Wescott, Guy Raymond	*Rumford*	Σ Α Ε House
Weymouth, Claude Raymond	*Pittsfield*	Φ Κ Σ Hose
Whitney, Clarence Alden	*Portland*	Σ Χ House
Wilder, Max Lincoln	*Augusta*	Σ Α Ε House
Willard, Sherwood Howe	*Greenfield, Mass.*	Φ Η Κ House
Willett, Francis Merrill	*Brockton, Mass.*	Main St.
Woodwell, Carroll Masters	*South Bristol*	Campus
Young, George Edgar	*Skowhegan*	Φ Γ Δ House
* Youngs, Frederick Shaw	*Brooklyn, N. Y.*	Β Θ Π House

SPECIAL STUDENTS

Bird, Walter Judson, Ch.	*Rockland*	Β Θ Π House
Brown, Louis Frank, Ag.	*East Dover*	Park St.
Cnilcott, Rebecca, Ds.	*Bangor*	Bangor
Coker, John James, Ce.	*Salem, Mass.*	Δ Κ House
Cole, Joseph Titcomb, Fy.	*Kennebunk*	Σ Α Ε House
Curtis, Colby, Me.	*Bangor*	Bangor
Danforth, Franklin Wendell, Fy.	*Skowhegan*	72 Main St.
Danforth, George Clapp, Ce.	*Gardiner*	Main St.
Ferguson, George, Ec.	*Springvale*	Σ Χ House
Fiske, Raymond Houghton, Fy.	*Lincoln*	Peters St.
Fuller, Richard, Fy.	*Salem, Mass.*	Β Θ Π House
Gale, George Bryant, Ag.	*Petersham, Mass.*	Δ Κ House
Goodwin, Earl Clinton, Ag.	*Auburn*	Main St.
Gregson, Lawrence Halliwell, Fy.	*Buffalo, N. Y.*	Δ Τ Δ House
Haley, George, Ag.	*Brownfield*	Forest St.
Hartill, Leonard Ramsden, Ag.	*Brunswick*	University Inn
Hatch, Harrison Morton, Ag.	*West Groton, Mass.*	Θ Χ House
Healy, Harry Clifford, Me.	*Lynn, Mass.*	Φ Κ Σ House
Hilton, William, Ce.	*Greenville*	Φ Κ Σ House
Hodges, Ralph Corydon, Ee.	*Richmond*	Δ Κ House
Lewis, Enos Boise, Ce.	*Springfield, Mass.*	Peters St.
Maddison, Walter Franklin, Me.	*West Lynn, Mass.*	103 Oak Hall
Maddocks, Chester Arthur, Ce.	*Ellsworth, R. F. D. 3*	Bennock St.

* In partial standing.

Page, Edwin Richard, Ec.	*Winterport,*	Δ K House
Quarmby, George Henry, Ee.	*Saugus, Mass.*	K Σ House
Richardson, Douglass Leffingwell, Ec.	*McKinley*	K Σ House
Richardson, Howard Byron, Ce.	*South West Harbor*	Φ K Σ House
Sawyer, Mabelle, Ds.	*Bangor*	Bangor
Schimmel, Erich, Ch.	*Orono*	Mill St.
Severance, Amanda Bailey, Lt.	*Old Town*	Old Town
Stearns, Luzetta Allen, Ds.	*Millinocket*	Mt. Vernon House
Tibbetts, William Herbert, Ch.	*Bangor*	Bangor
Towne, Donald Moore, Fy.	*Madison*	Σ X House
Weston, Edward Gordon, Ee.	*Fryeburg,*	102 Oak Hall
Wilkinson, John Daniel, Ce.	*So. Portland*	Θ E House
Wu, Maen Chang, Ce.	*Canton, China*	Campus
York, George James, Hy.	*Yarmouthville,*	

SHORT PHARMACY

SECOND YEAR

Bowdoin, Harold Webster	*Kennebunk*	Σ A E House
Butts, Russell Carlton	*Kingfield*	32 North Main St.
Fulton, Ellwyn Mortimer	*Blaine*	Σ X House
Hinkley, Victor Hugo	*West Jonesport*	Park St.
Hutchins, Carlton	*Kingfield*	North Main St.
Johnson, Fred Clook	*Princeton*	Myrtle St.
Murphy, William Edward	*Portland*	10 Pine St.
Newport, Edward Foster	*Amherst, Mass.*	Commons
Steele, Clayton Harvey	*West Jonesport*	Φ H K House

FIRST YEAR

Barrett, Woodbury Gates	*Gorham, N. H.*	Σ X House
Blackington, Carl Adams	*Rockland*	Δ T Δ House
Butterfield, Alice Nason	*Rochester, N. H.*	K Σ House
Fenderson, Charles Willard	*Calais*	Δ T Δ House
Nugent, Lloy Dodge	*No. Lubec*	10 Pine St.
Osboune, William, Jr.	*Bangor*	Bangor
Roberts, George Harley	*Brownville Junction*	B Θ Π House
Sanborn, Gilbert Gould	*Bangor*	Bangor
Shields, Victor Hopkins	*Vinalhaven*	Φ Γ Δ House

SCHOOL OF AGRICULTURE

SECOND YEAR

Beckler, Earle Harlow	*Livermore Falls*	54 No. Main St.
Dean, John	*Biddeford*	Park St.
Hall, Alfred Camden	*Biddeford*	Stillwater
McDougal, Harold George	*Boston, Mass.*	Θ E House
Peabody, Maurice Arland	*Exeter*	Dairy House
Pingree, Perley Louville	*Denmark*	Campus
Piper, Seavey Allan	*Troy*	Myrtle St.
Wadsworth, Harry Bradford	*Cornish*	Campus
Wilbur, Melvin Foster	*Pembroke*	86 Main St.

FIRST YEAR

Austin, N. Kenneth,	*Danville*	Campus
Bachelder, Guy Stetson	*Bangor*	Φ Γ Δ House
Bartlett, Everett Webber	*Monroe, R. F. D. No. 3*	Main St.
Bradford, Preston Willis	*Goldenridge*	Φ K Σ House
Clark, Maurice Graham	*Winterport, R. F. D. 2*	Main St.
Clancy, Francis Everest	*Orono*	4 Myrtle St.
Covell, Henry Tewksbury	*Farmington*	Bradley
Damon, Charles Donaldson	*Jamaica Plain, Mass.*	Θ X House
Everleth, Roger	*Auburn*	Forest St.
Goff, Ralph Wilbur	*West Roxbury, Mass.*	Oak Hall
Goodwin, Howard Freeman	*Auburn*	Campus
Hamilton, Willis Crosby	*West Scarboro*	Park St.
Hammond, Franklin	*Lynn, Mass.*	Θ E House
Harrington, Daniel Michael	*Hallowell*	Θ X House
Jones, Roy Edwin	*Pelham, N. H.*	Park St.
Jones, Walter Scott	*Bangor*	Mill St.
Kimball, Everett Augustus	*So. Lawrence, Mass.*	Σ A E House
Larrabee, Charles Carlyle	*Old Town*	Old Town
Morrison, Walter Ellis	*Braintree, Mass.*	Forest St.
Murphy, Alonzo Michael	*Sandwich, Mass.*	A T Ω House
Nason, William Henry	*Calais*	1 Park St.
Osgood, Carrol Merton	*East Brownfield*	205 Oak Hall
Payson, Carl Pierce	*Guilford*	Θ E House
Pearson, Peter Andrew	*Calais*	Bangor
Rowe, Wilfred Sherman	*Auburn*	Main St.
Ryan, Philip Eary	*Milltown*	Σ A E House
Sisson, Walter Sylvester	*Machiasport*	28 Pine St.

Smith, Perley Foster	*East Brownfield*	Forest St.
Smith, Ralph Lord	*Kennebunkport*	Forest St.
Stobie, George James	*Waterville*	A T Ω House
Taylor, Cleba Charles	*Skowhegan*	1 Park St.
True, Harry Pearce	*New Gloucester*	Park St.
Wadsworth, John William	*Cornish*	Park St.
Ward, Clyde Maxim	*Thorndike, R. F. D. No. 1*	312 Oak Hall
Waterman, Wilfred Allen	*Auburn*	Campus
Wyman, John Weston	*Norway, R. F. D. No. 2*	Oak Hall

TEACHER'S COURSE IN AGRICULTURE

Mitchell, Ralph Pike	*West Newfield*	Myrtle St.

SUMMER TERM

(Abbreviations indicate subjects taken)

Adams, Ida Matilda Teacher.	*Orono*	Ag. Ed. Hy.
Aiken, Edith Nora, B. A., University of Maine Teacher.	*Brewer*	Lt. Ms. Rm.
Amadon, Arthur Franklin	*Boston, Mass.*	Ec. Eh.
Arey, Florian George	*Stonington*	Lt. Rm.
Atwood, Albert Samuel	*Phillips*	Ec. Ed.
Avery, Willis Frank Principal.	*Limington*	Ag. Ht.
Ayer, Elmore	*Dorchester, Mass.*	Ms. Ps.
Baker, William Asa	*Richmond*	Eh. Lt.
Barker, Jack Sears	*Calais*	Ec. Md. Rm.
Bartow, William Edgar	*Utica, N. Y.*	Ch. Ec. Md.
Beale, Douglas March	*Orono*	Ms. Ps. Rm.
Bennett, Melville Allen	*Pittsfield*	Ph.
Bien, Zeus Sun	*Peking, China*	Ch. Eh. Hy. Ps.
Bien Zeus Sun Kohkin, Mrs.	*Peking, China*	Ds. Ed.
Bigney, Edmund Scammon	*Greenville*	Ch. Ec. Hy.
Blanchard, Franklin Roy	*Beverly, Mass.*	Ch. Eh. Gm.
Bradbury, Ira Miller	*Gorham*	Eh. Ms. Rm.

Bradford, Harry Lewis, A. B. Bates College Principal	*Wiscasset*	Ag. Ht. Ph.
Browning, Neva Lenora Teacher.	*Orono*	Ag. Ed. Rm.
Burch, Joseph Francis Principal.	*Biddeford Pool*	Ec. Ed. Ms.
Chang, Charlotte	*Shanghai, China*	Ed. Eh.
Chapman, George Bunker	*Orono*	Ec. Md.
Chapon, Robert Henri	*Bangor*	Ch. Ms. Rm.
Chick, Margaret Amy Teacher.	*Bangor*	Eh. Gm. Rm.
Chien, Yih C.	*Changchaw, China*	Eh. Ms. Rm.
Chilcott, Clio Melissa, A. B., A M., Colby College Teacher.	*Bangor*	Ds.
Coffey, Ralph Thompson	*South Brewer*	Lt. Ms. Ps.
Coffin, Celia May	*Bangor*	Ed. Rm.
Congdon, William Everett	*Portland*	Rm.
Conley, Albert Davis	*Woodfords*	Ch.
Cooper, Parker Messer	*Jefferson*	Hy. Ms.
Coughlin, Fred Thomas	*Bangor*	Ps.
Crabbe, Everett Edward	*Dover*	Ec. Eh. Hy.
Cummings, Nathan Clifford	*Gorham*	Ch. Eh. Ps. Rm.
Danforth, John Henderson	*Foxcroft*	Eh. Ms. Rm.
Danforth, Stephen Paul	*Foxcroft*	Eh. Ms. Rm.
Davis, Arthur Evans	*Brownville*	Ms. Ps.
Davis, Clarion Almado	*Collinsville, Ct.*	Eh. Hy. Lt.
Davis, Raymond Earl	*Rumford*	Ch. Ms. Ps.
Dennett, Jean Elwood	*Arlington, Mass.*	Ch. Eh. Ms.
Derby, Frank Holliday	*Revere, Mass.*	Ec. Eh. Hy.
Dinsmore, Ernest Leroy, B. A., University of Maine Science Teacher.	*Auburn*	Ch. Ms.
Dinsmore, Mary Crane Teacher.	*Auburn*	Eh. Rm.
Dixon, Esther Margaret	*Southwest Harbor*	Ec. Eh. Hy. Rm.
Drake, Mary Adelaide Principal.	*Worcester, Mass.*	Ec. Eh. Hy.
Eddy, Virginia May	*Orono*	Lt. Ms. Rm.

Faulkner, Harold Clark	*Lynn, Mass.*	Ps. Rm.
Faulkner, William Thomas	*Curtis Corner*	Hy. Rm.
Fisher, Herbert Levi	*Charlotte*	Ms. Ps.
Fitch, Leroy Allen	*East Sebago*	Ec. Md.
Foster, Philip	*Waterville*	Ch. Ms.
Gerry, Louis Duncan Tallman	*Katahdin Iron Works*	Ch. Hy. Ms.
George, Daisy Evelyn Teacher.	*Orono*	Ag. Ed. Rm.
Getchell, Edward Leonard	*Waterville*	Gm. Hy. Ps.
Gibbs, Charles Shelby	*Rangeley*	Ch. Ms. Ps.
Goodier, Edna Amy Librarian and Teacher	*Saco*	Eh.
Goodnow, Alden Church	*Fairhaven, Mass.*	Md. Ps.
Grant, Charles Harold	*Bangor*	Ec. Ed. Ps.
Gregson, Lawrence Halliwell	*Newburyport, Mass.*	Ec. Eh. Ms.
Guild, Amy Louise	*Providence, R. I.*	Ed.
Haley, George	*East Brownfield*	Ch. Ht.
Hamlin, George Harold	*Orono*	Ch. Eh.
Haskell Benjamin	*Westbrook*	Eh. Ms. Ps.
Hatch, Roy Otis, B. S., University of Maine	*Orono*	Ch.
Henderson, Robert Raymond	*Madison*	Ch. Gm. Ms.
Higgins, Oswald Burnett	*Sewaren, N. J.*	Eh. Gm. Ms.
Hight, George Cecil Superintendent.	*Athens*	Ed.
Hodges, Ralph Corydon	*Richmond*	Ms. Ps.
Homans, Harry	*North Vassalboro*	Ec. Eh. Hy.
Homans, Lois	*New York, N. Y.*	Ag. Ds. Ht. Ph.
Hurley, Katharine Mary Elizabeth Teacher .	*Fall River Mass.*	Ds. Eh.
Hurley, Margaret Theresa Teacher.	*Fall River, Mass.*	Eh. Rm.
Johnstone, Leslie Ingalls, B. S., University of Maine Instructor.	*Milford*	Md. Ms.
Johnson, Charles Augustus	*Waltham, Mass.*	Ed. Gm. Ms.
Jones, Gertrude May Teacher.	*Corinna*	Rm.
Jose, Frances Elizabeth, A. B., A. M., Maine Wesleyan Woman's College Teacher	*Dexter*	Eh. Rm.

Keating, Joseph Sylvester, B. S. University of Maine	*Red Beach*	Ch. Ms.
Kelleher, Katherine Louise Teacher.	*Orono*	Ag. Ed. Rm.
Kelleher, Marie Therese Teacher	*Orono*	Ag. Ed. Hy.
Kelly, Esther Mary Teacher.	*Orono*	Ag. Ed. Hy.
King, Angie Rose Teacher.	*Orono*	Ed. Eh. Hy.
Knapp, Lucia Bradford	*Duxbury, Mass.*	Gm. Hy. Rm.
Libby, Eliza Sands Teacher.	*West Buxton*	Eh. Ms.
Lougee, George, LL. B., University of Maine, College of Law Principal.	*Bangor*	Ch. Eh. Ht. Rm.
McBride, Herbert Clayton Grover	*Easton*	Hy. Ms.
McGee, Maude Ellen Teacher.	*Orono*	Ag. Ed. Hy.
McManus, Margaret Ellen	*Bangor*	Ed. Hy.
MacSkimmon, Anna Teacher.	*Bangor*	Gm. Lt.
Mariner, Hazel Folsom	*Milford*	Eh.
Maxwell, Edwin Clayton	*Palmer, Mass.*	Ec. Md.
Merrill, Lucius Herbert, B. S. Sc D., University of Maine Professor, University of Maine.	*Orono*	Rm.
Merrill, Annie Clifford	*Orono*	Rm.
Merrill, Harriet Sophia	*Orono*	Ds.
Merrill, Katharine Buffum	*Orono*	Ms. Rm.
Morse, George Warren,	*Bangor*	Ms.
Nealey, Leonee Coombs	*Bangor*	Gm. Lt. Ms.
Newman, George Burgess	*Fryeburg*	Eh. Rm.
Nickerson, Margaret Elaine	*Sorrento*	Eh. Gm.
Page, Della Butler Teacher.	*No. Newburg*	Ag. Ed. Hy.
Peabody, Ellen Holway Teacher.	*Machias*	Ec. Gm. Lt.
Peaslee, Dana Newton	*Lynn, Mass.*	Ec. Hy. Md.

Peckham, Frederic Metcalf, A. B., Bates College Teacher.	*Lewiston*	*Ps.*
Perkins, Lena Georgia Teacher.	*Oxford*	Ec. Eh. Hy. Ms.
Perkins, Walter Ezra	*Old Town*	Ms. Ps.
Perry, Earl Frances	*Bangor*	Lt. Ms.
Pfaff, Gladys Barbara, A. B., Smith College Teacher.	*Bangor*	Gm. Rm.
Phelps, Donald Walker	*Robbinston*	Eh. Ms.
Pope, Morrill Stuart	*East Machias*	Ch. Eh. Ps.
Prescott, Glenn Carleton Principal.	*West Forks*	Ag. Ht. Ms. Ps.
Richardson, Douglas Leffingwell	*McKinley*	Gm. Ms. Ps.
Roberts, George Harley	*Brownville Jct.*	Ms. Ps.
Rowell, Frank Lester District Superintendent.	*Hartland*	Ch. Ed. Eh. Ps.
Sawtelle, Donald Wing	*Orono*	Ms. Rm.
Sawyer, Winfield Fenno	*Bangor*	Lt. Ms.
Schimmel, Erich	*New York, N. Y.*	Ch. Ms.
Severance, Amanda Bailey Teacher.	*Old Town*	Lt. Rm.
Shepherd, Thomas Dudley	*Wellesley Hills, Mass.*	Ch. Eh. Gm. Rm.
Shine, Laura Ethel Teacher.	*Orono*	Ed. Eh. Hy.
Simpson, George Stevens	*Old Town*	Eh. Ch.
Sinclair, Roy Leighton Principal.	*Lincoln*	Ch. Ed.
Small, Nathan Houston	*Belfast*	Ec. Ms.
Smith, Edward Henry, B. S., University of Maine Science Teacher.	*East Sullivan*	Ch. Ps.
Snushall, Mary McLellan, A. B., University of Illinois Librarian.	*Springfield, Mass.*	Ds.
Snushall, Wilson, A. B., Amherst College Teacher.	*Haverhill, Mass.*	Ec. Hy.
Snyder, Mabel Frances	*Orono*	Ag. Ed. Hy.

Stevens, Edwin Henry	*Orono*	Rm.
Stickney, Charles Edwin	*Portland*	Ec. Eh. Md.
Stinchfield, Ruth	*Danforth*	Eh. Ms. Rm.
Stowers, Frances Miriam	*Searsport*	Rm.
Studley, Ernest Allen	*Rockland, Mass.*	Eh. Rm.
Sun, Yuen-fong Ralph	*Serchow, China*	Ed. Ms.
Sun, Yu-fong Philander	*Serchow, China*	Eh. Rm.
Thomas, Hayward Stanley	*Milo*	Ec. Eh.
Thompson, Gladys	*Orono*	Ms. Rm.
Thompson, Dorothy	*Orono*	Ms. Rm.
Thurston, Charlotte Principal.	*West Brookfield, Mass.*	Eh. Lt.
Tibbetts, William Herbert Teacher.	*Bangor*	Ch.
Tucker, Samuel Gordon Pastor.	*Howland*	Eh. Gm. Hy.
Verrill, Elmer Russell, A. B., Bates College Principal.	*Lee*	Ec. Hy. Lt. Ps. Rm.
Wadleigh, Jennie Mitchell	*Old Town*	Gm. Lt.
Waite, Sumner	*Portland*	Ec.
Wakefield, Oscar Abel	*Andover*	Ec. Hy. Md
Walker, Ernest Thaxter	*Biddeford*	Rm.
Wass, Clifton Ennis Superintendent.	*Sangerville*	Ed. Eh. Lt.
Weeks, Allen Henry	*Jefferson*	Md. Ps.
Weld, Edith Claire Assistant Librarian.	*Old Town*	Ec. Eh.
Wescott, Clifford Walker	*Patten*	Ch. Eh. Hy.
Whittier, Harold Kenneth	*Leominster, Mass.*	Ag. Ed. Eh. Ph.
Wilkins, Blanche Teacher.	*Wilton*	Eh.
Willey, Walter Brown, Jr.	*Bangor*	Lt. Ms. Rm.
Woods, Leroy Leonard Principal.	*Wells*	Ec. Ed.
Woodward, George Thomas	*Lisbon Falls*	Ch. Ms. Rm.
Wu, Maen Chang	*Canton, China*	Gm. Ms. Rm.
Young, Mary Kathleen Teacher.	*Brewer*	Ms. Rm.

THE COLLEGE OF LAW

GRADUATE STUDENTS

Bass, Frank Lyman, B. A., LL. B. *Bangor* 82 Third St.
Bowdoin College, 1907, University of Maine, 1910

Blanchard, Benjamin Willis, LL. B. *Bangor* 118 Congress St.
University of Maine, 1904.

Bridges, Corril Ellsworth, LL. B. *Charlestown, Mass.*
Albany Law School, 1887.

Brown, Leon Gilman Carleton, LL. B. *Milo*
University of Maine, 1905.

Cartier, Arthur Jean Baptiste, LL. B. *Biddeford*
University of Maine, 1909.

Clough, George Edwin, LL. B. *Monson, Mass.*
University of Maine, 1904.

Cotton, Carl, B. A., LL. B. *Contoocook, N. H.*
Colby College, 1900. Univer sity of Maine, 1906

Davis, Waldo Trevor, B. A., LL. B. *Worcester, Mass.*
Dartmouth College, 1901. University of Maine, 1905

Dudley, John Perley, LL. B. *Houlton*
Colby College. University of Maine, 1908

Foster, Walter Herbert, LL. B. *Dorchester, Mass.*
University of Maine, 1905

Fox, Lewis Edwin, LL. B. *Worcester, Mass.* 262 Ohio St.
University of Maine, 1906

Graton, Claude Dewing, LL. B. *Burlington, Vt.*
University of Maine, 1900

Jones, Lawrence Vivian, LL. B. *Bangor* 267 Pine St.
University of Maine, 1910

Lemaire, Charles Wendell, LL. B. *Taunton, Mass.*
University of Maine, 1910

Lewis, Charles Goodell, LL. B. *Boston, Mass.*
University of Maine, 1908

Linehan, Daniel Joseph, LL. B. *Haverhill, Mass.*
University of Maine, 1905

Lord, Harry, LL. B. *Bangor* 82 Cumberland St.
University of Maine, 1902

Monroe Edward Roy, LL. B. *Portland*
University of Maine, 1907
Noble, Ernest Eugene, B. A., LL. B.
Portland
Colby College, 1897. University of Maine, 1903
Perkins, DeForest Henry, Ph. B., M. A., LL. B.
Skowhegan
University of Maine, 1900, 1905. Illinois College of Law, 1906
Record, Lewis Stillman, Ph. B., LL. B.
Ashland, N. H.
Brown University, 1902. University of Maine, 1905
Reid, Charles Hickson, LL. B. *Bangor* 60 Lincoln St.
University of Maine, 1903.
Robinson Curville, Charles, LL. B. *New York City*
University of Maine, 1905
Robinson, William Henry, LL. B. *Bangor* 42 Hammond St.
University of Maine, 1902
Seavey, Ernest Linwood, LL. B. *Seattle, Wash.*
University of Maine, 1908
Skillin, Carroll Brown, LL. B. *Portland*
University of Maine, 1908.
Toole, Christopher, LL. B. *Hartford, Conn.*
University of Maine, 1910.
Warren, John Clifford, B. S., LL. B.
Portland
University of Maine, 1902. Boston University, 1905

SENIORS

Blaisdell, William Bradley *North Sullivan* 214 French St.
Campbell, Collen Carroll *Provincetown, Mass.*
62 Holyoke St., Brewer
Carter, Rodney Walker *Bluehill* Φ A Δ House
Chesley, Franklin Russell *Saco* 229 State St.
Conary, Wilfred Grindle *Bluehill Falls* Φ A Δ House
Connors, George Leroy *North Attleboro, Mass.* Φ A Δ House
Gould, Daniel Israel *Bangor* 127 Congress St.
Bowdoin College
Harvey, Brad Dudley *Haverhill, Mass.* Φ A Δ House
Hosmer, Charles Bridgham *Hudson, Mass.* 474 Main St.
Liggett, John Edmund *Augusta* 72 West Broadway
Littlefield, Frederic Baxter, *Macon, Ga.* 112 Sanford St.
Member of Georgia Bar, 1909

Madore, John Bernard, B. A. *Van Buren* Φ Λ Δ House
Van Buren College, 1908
Merrill, Wilbur Frances *Wiscasset* 25 State St.
Owens, William Daniel *Lynn, Mass.* Φ Λ Δ House
Boston University Law School
Putnam, Aaron Albert, B. A. *Houlton* 214 French St.
Bowdoin College, 1908
Rhodes, James Edward, 2d, B. A. *Hartford, Conn.* 25 State St.
Bowdoin College, 1897. Member of Connecticut State Bar, 1907, and bar of the Supreme Court of the United States, 1908.
Sweeny, William Henry *Worcester, Mass.* 112 Sanford St.
Sweetser, George Roy, B. A. *Bangor* 36 Seventh St.
University of Maine, 1909
Tertzag, Jacob Kevork, B. A. *Mamouret-ul-Aziz, Armenia*
Euphrates College, 1902 350 Union St.
Varney, Henry Harrison *East Rochester, N. H.* Φ Λ Δ House

JUNIORS

Adams, Frederick Prescott *Cherryfield* 218 French St.
Baldwin, William Vincent Reginald *No. Wilbraham, Mass.*
214 French St.
Burns, Joseph Leo *Taunton, Mass.* 7 Boynton St.
Cook, Albert Fremont *Bangor* 645 Union St.
University of Maine
Davis, John Bradford *Haverhill, Mass.* Φ Κ Σ House
79 Kenduskeag Ave.
Dow, Charles Whitfield *Caribou* Φ Λ Δ House
Bates College
Fellows, Frank *Bangor* 33 Jefferson St.
University of Maine
Gardner, Phillips Brooks *Machias* 183 Cedar St.
Greene, Arthur Albert *Highgate Center, Vt.* Φ Λ Δ House
University of Vermont
Harvey, Leigh Irving *Bangor* 8 Somerset St.
Ingalls, Ralph Morrill *Bridgton* Φ Λ Δ House
McHale, Martin Joseph *Stoneham, Mass.*
University of Maine Θ Ξ House, Orono
Rand, Howard Benjamin *Haverhill, Mass.* Φ Λ Δ House
Sawyer, Elmer Warren *No. Anson* 290 French St.

Sawyer, Henry Waide	*Milbridge*	Φ A Δ House
Sullivan, Thomas Edward	*Lubec*	Φ A Δ House
Thorne, James Henry	*No. Anson*	290 French St.

FIRST YEAR

Adams, Charles Bayley	*Randolph, Vt.*	Φ A Δ House
Allen, Vivian Roath	*Norwich, Conn.*	68 Fifth St.
Barwise, Mark Alton	*Bangor*	29 George St.
Bove, Bernard Anthony, B. A. Van Buren College, 1906	*Portland*	
Beck, Andrew Jackson	*Deer Isle*	Φ A Δ House
Bowen, Everett Harlow, B. A., M. S. Colgate University, 1903. University of Maine, 1905	*Bangor*	
Boyle, James Louis, B. A. St. Joseph College, 1906	*Calais*	Y. M. C. A.
Chien, Yih C. Bates College and University of Maine	*Changchow, China*	112 Sanford St.
Corliss, Edgar Francis, Jr.	*Cumberland*	Y. M. C. A.
Cowan, Walter Albion Bates College	*Pittsfield*	25 State St.
Dwyer, Willia Henry University of Maine	*Biddeford*	Y. M. C. A.
Ford, Thomas John	*Bangor*	175 Grove St.
Garvin, William Henry	*Taunton, Mass.*	7 Boynton St.
Gillin, James McKinnon Bowdoin College	*Bangor*	119 Pine St.
Hennessy, Harold Stewart University of Maine	*Bangor*	5 High St.
Kennedy, Michael James	*Woodland*	Y. M. C. A.
Roberts, Christopher Shirley	*Vinalhaven*	Φ A Δ House
Ryder, Nellie Jane, B. A. Vassar, 1907	*Bangor*	52 Highland Ave.
Studley, Ernest Allen Dartmouth College	*Rockland, Mass.*	112 Sanford St.
Stanley, John William	*Enfield, N. H.*	Φ A Δ House
Turner, Erldon Blaisdell	*Augusta*	Φ A Δ House
Weeks, Harold Edward, B. A. Bowdoin College, 1910	*Fairfield*	77 Center St.

SPECIAL STUDENTS

Aiken, Percy Lewis	*Sorrento*	Φ Λ Δ House
Beliveau, Albert	*Rumford*	77 Center St.
Clarke, Percy Truman	*Franklin*	25 State St.
Connolly, Joseph Vincent	*Fall River, Mass.*	7 Boynton St.
Connors, James Albert	*Stoughton, Mass.*	148 Essex St.
Dodd, Frederick Beaton	*Bangor*	Φ Λ Δ House
Epstein, Myer Wilfred	*Bangor*	303 Essex St.
Geary, Milton Roscoe	*Marlboro, Mass.*	12 Carrol St.
Long, Edmund Joseph	*Lynn, Mass.*	25 State St.
Levi, Simon	*Portland*	176 Court St.
Morrison, Roy	*Saco*	25 State St.
University of Maine		
O'Hear, Hugh Joseph	*Thompsonville, Conn.*	Φ Λ Δ House
Powers, Frank	*Lewiston*	Φ Λ Δ House
Ross, James Brackett	*Phillips*	Y. M. C. A.
Shalit, Harold Melville	*Portland*	25 State St.
Westgate, Harry Bloch	*Taunton, Mass.*	28 Second St.

WINTER COURSES

DAIRYING AND GENERAL AGRICULTURE

Abbott, Willard W.	Auburn
Bean, Albert L.	South Hudson
Getchell, Thomas G.	Machias
Larrabee, John A.	Center Belmont
McAfee, Robert	Hebron
McIntire, Clayton S.	East Waterford
Markham, Enoch A.	Norridgewock
Milliken, Henry M.	West Scarboro
Patten, Roland T.	Skowhegan
Sisson, Howard R.	Whitneyville
Waterman, Ira H.	Auburn
Waterman, Wilfred A.	Auburn

HORTICULTURE

Allen, C. L.	
Bacon, H. A.	Unity
Bowman, H. G.	Hebron

Brackett, G. A.	Limington
Conant, H. L.	Hebron
Cummins, C. L.	West Paris
Douglass, E. S.	Sebago
Elder, G. K.	Lewiston
Ellis, Harold	Rangeley
Fuller, F. C.	New Vineyard
Gardiner, R. H.	Gardiner
Gile, L. H.	Alfred
Littlefield, John	
Patten, R. T.	Skowhegan
Peters, A. B.	Bangor
Peters, W. C.	Bangor
Shaw, S. M.	Auburn
Stone, W. C.	
Verrill, E. M.	Auburn
Wade, J. M.	Curtis Corner
Weston, J. H.	Gardiner
Wheeler, J. R.	Chesterville

POULTRY COURSE

Aiken, M. B.	Brewer
Arey, M. S.	Bar Harbor
Bissell, E. H.	Brewer
Chandler, Amos	Newry
Cluskey, James	Cranberry Isle
Coburn, W. W.	Bangor
Daggett, W. T.	Waterville
Farrington, C. O.	Brewer
Fellows, Donald	Orono
Faye, M. A. B.	Westbrook
Griggs, R. H.	Dedham, Mass
Harris, H. L.	Chebeague Island
Harris, W. A.	Chebeague Island
Hatch, F. M.	Dark Harbor
Hodges, D. S.	South Brewer
Homestead, E. H.	Orono
Jones, J. A.	Fairfield Center
McKenney, Julia	Stillwater
Miller, H. C.	Bangor

Neal, F. R.	Belfast
Perry, Earl	Bangor
Robinson, E. M.	Lewiston
Smith, E. C.	Kennebunkport
Starrett, N. G.	Warren
Stratton, C. C.	Hancock
Taylor, J. M.	Hermon
Treworgy, Elmer	Bangor
Tupper, F. H.	Bangor
Wade, F. E.	Westbrook
Wadsworth, C. S.	Centralia, Va.

STUDENTS REGISTERED FOR FARMERS' WEEK, 1910

Abbott, F. A.	Orono
Adams, Merle	Canton Point
Aiken, M. B.	Brewer
Apollonio, Raymond	W. Gouldsboro
Apollonio, S. L.	W. Gouldsboro
Arnold, Mabel	Orono
Ash, H. L.	W. Gouldsboro
Averill, A. G.	Old Town
Averill, Mrs. A. G.	Old Town
Averill, A. W.	Orono
Averill, C. A.	Stillwater
Averill, H. S.	Stillwater
Averill, Mrs. W. S.	Orono
Avery, Mrs. A. E.	Brewer
Austin, Hattie	Milford
Bailey, W. B.	Portland
Baker, Helen	Orono
Barker, A. C.	Canton
Bartlett, Mrs. Ella	Bangor
Bassett, R. S.	Old Town
Bates, I. W.	Corinna
Bean, Ida	Old Town
Bean, Mrs. P. L.	Orono
Bearce, Boyden,	Eddington
Beckler, S. H.	Livermore Ctr.
Bennett, H. L.	Kenduskeag
Betters, Mrs. John	Orono
Bickford, Mrs. Ross	Orono
Bickmore, E. D.	Stockton Springs
Black, H. C.	Hebron
Black, Mrs. H. C.	Hebron
Bond, N. W.	Orono
Boston, L. B.	Fort Kent
Boultbee, Charles	Bangor
Boultbee, L. H.	Bangor
Boultbee, Mary	Bangor
Boyle, A. G.	Orono
Boynton, E. W.	Harrington
Boynton, F. W.	Eddington
Bragg, J. P.	N. Islesboro
Brett, B. C.	Auburn
Briggs, C. H.	Turner
Brown, Mrs. W. A.	Orono
Buck, L. H.	Bangor
Buck, Mabel	Stillwater
Buffam, L. A.	Orono
Burgess, Mrs. T. H.	Bangor
Burns, F. B.	Newport
Buswell, A. F.	Stetson
Butterfield, C. E.	Bangor
Butterfield, Hazel	Bradley
Buzzell, L. A.	Old Town
Came, C. F.	Bar Harbor
Campbell, Mrs. W. J.	Old Town
Cannon, Mrs. E. A.	Orono
Carsley, F. J.	Dexter
Cashman, Helen	Worcester, Mass.
Chambers, Lizzie	Orono
Chambers, Mrs. S. D.	Orono
Chaplin, Anna	Orono
Chaplin, J. E.	Orono
Chapman, E. R.	E. Orrington
Chapman, Mrs. E. R.	E. Orrington
Chapman, Minne	E. Corinth
Chase, Mrs. G. D.	Orono
Chester, F. D.	Boston, Mass.
Cheswell, Mrs. E. C.	Orono
Chillman, Arthur	Bar Harbor

Cloudman, L. E.	Bangor
Cobb, H. J.	Harrison
Colburn, Mrs. W.	Orono
Conser, Mrs. H. N.	Orono
Cook, A. S.	Presque Isle
Cookson, R. L.	Bangor
Cookson, Mrs. R. B.	Bangor
Copeland, R. L.	Holden
Craig, J. M.	Orono
Craig, Mrs. Wallace	Orono
Crosby, D. J.	Washington, D. C.
Crowell, Mrs. James	Orono
Davee, Mrs. E. W.	Orono
Davis, Luella	Charleston
Davis, Mary	Veazie
Day, Mrs. R. C.	Orono
Demerritt, J. L.	Dexter
Dennett, F. W.	Sherman
Dickey, Jennie	Bangor
Dike, Z. C.	Orono
Dillingham, C. A.	Hampden
Dillingham, Mrs. C. A.	Hampden
Dillingham, Virginia	Hampden
Doucett, Mrs. J. P.	Orono
Dow, W. H.	Island Falls
Dow, Mrs. W. H.	Island Falls
Dresser, George	Newport
Dunham, C. C.	Foxcroft
Dunn, Mrs. C. J.	Orono
Dunning, H. A.	Bangor
Edes, Mrs. R. H.	Bangor
Edgecomb, F. W.	Cornish
Edwards, Ard	Lincoln
Ellison, Mrs. S. E.	W. Brooksville
Estabrooke, K. C.	Orono
Evans, S. G.	Waldo
Farnham, Mrs. W. E.	Orono
Farrar, Mrs. J.	E. Corinth
Farrington, F. B.	Brewer
Fels, A. B.	Yarmouth
Fernald, Mrs. Walter	Rockland
Fish, E. J.	Litchfield
Fletcher, C. E.	Wilton
Folsom, Edith	Stillwater
Folsom, Mrs. F. J.	Stillwater
Folsom, Gertrude	Stillwater
Folsom, Vernon	Stillwater
Foss, Mrs. A. M.	Kenduskeag
Fountain, Joseph	Bangor
Fournier, Annie	Orono
Fournier, E. M.	Orono
Fox, Mrs. Charles	Bangor
Frazier, Mrs. Homer	Brewer
French, G. H.	Augusta
Fuller, Elizabeth	Rockland
Gallup, C. M.	Skowhegan
Gannett, Mrs. J. C.	Orono
Gardner, Mrs. V. R.	Orono
Garland, Clarence	Bangor
Gartley, G. E.	Presque Isle
George, C. W.	E. Orrington
George, Mrs. C. W.	E. Orrington
Getchell, Ernest	Limestone
Gilbert, B. E.	Bangor
Gilbert, G.	Corinna
Gilbert, Mrs. Thomas	Orono
Glidden, J. D.	Frankfort
Gilman, A. L.	Foxcroft
Gilman, A. W.	Foxcroft
Gilman, Mrs. B. P.	Orono
Given, Mrs. Fred	Orono
Goodridge, N. E.	Orono
Goodridge, O. T.	Orono
Gould, Ralph	Wilton
Grant, F. H.	Bangor
Grant, P. A.	Unity
Graves, M. B.	Orono
Gray, Mrs. G. A.	Old Town
Gray, Helen	Old Town
Gray, Lena	Old Town
Greenwood, Russell	Presque Isle
Griffin, June	Stillwater

Grindle, J. L. Northeast Harbor
Grover, G. P. Brewer
Grover, Mrs. M. E. Brewer
Halfkenney, H. A. Bangor
Hall, Mrs. Norman Brewer
Ham, T. E. Monson
Hamilton, B. F. Biddeford
Hamilton, Mrs. H. G. Bangor
Hamlin, Mrs. H. M. Gardiner
Hamlin, Mrs. T. L. Orono
Hammond, Mrs. R. L. Orono
Hamor, Ralph Bar Harbor
Hancock, Milton Casco
Handy, A. I. Augusta
Hannaford, D M. Bradley
Harding, Mrs. G. E. Old Town
Harrington, Mrs. J. A. Boston, Mass
Harris, D. D. Old Town
Harris, J. M. West Minot
Harris, Mrs. J. M. West Minot
Harris, W. A. Chebeague
Hart, Mrs. J. N. Orono
Hashey, Elizabeth Orono
Haskell, Roger Westbrook
Hassell, Mrs. C. S. Sebec
Hathorn, Mrs. F. H. Orono
Hendrickson, Peter Yarmouth
Henry, F. O. Worcester, Mass.
Hewitt, I. R. Machias
Hinkley, G. W. Hinkley
Hirst, C. H. Welchville
Hitchings, E. F. Waterville
Hobart, Mrs. H. Stillwater
Hogan, A. J. Orono
Holston, W. H. Cumberland Mills
Homestead, Mrs. E. H. Orono
Hopkins, Mrs. G. H. Bangor
Hopkins, Harry E. Eddington
Hubbard, W. W. Fredericton, N. B.
Huddilston, Mrs. J. H. Orono
Ireland, R. E. Corinna
Ireland, Mrs. R. E. Corinna
Jackman, P. E. Vanceboro
Jackman, Mrs. W. F. Orono
Jellison, E. M. Old Town
Jennings, Rose Hampden
Johannsen, Mrs. O. A. Orono
Johnson, A. G. Bangor
Johnson, C. E. Machias
Johnstone, Mrs. L. I. Milford
Jones, C. L. Corinna
Jones, Mrs. C. L. Corinna
Jones, E. M. Unity
Jones, John Searsport
Jones, M. C. Etna
Jose, S. O. Dexter
Joy, Mrs. I. H. Bangor
Judkins, M. V. B. Orono
Kelliher, Mrs. B. P. Orono
Kelly, Leland Orono
Kenney, C. L. Orono
Kenney, Mrs. C. L. Orono
Kent, Mrs. B. H. Stillwater
Kent, Emily Stillwater
Kent, May Stillwater
King, Mrs. Louis Orono
Kingsley, E. R. Orono
Kittredge, C. A. Milford
Kittredge, Mrs. C. A. Milford
Klarance, M. Etna
Knowles, C. C. Corinna
Lane, Mrs. R. F. Orono
Larrabee, Asa Ctr. Belmont
Leach, E. C. Eddington
Leach, W. S. E. Eddington
Leadbetter, A. A. Bangor
Leavitt, C. C. Turner
Leavitt, Mrs. C. C. Turner
Leavitt, R. B. Etna
Leavitt, Jr., R. B. Etna
Leland, C. R. Mechanic Falls

Libby, E. H.	Auburn
Lieb, Mrs. E. L.	Searsport
Littlefield, L. A.	Lincoln
Look, H. M.	Jonesboro
Lord, Mrs. A. L.	Orono
Lord, H. A.	Orono
Lovejoy, Helen	Stillwater
Lowell, G. M.	Bangor
Lufkin, Mrs. George	Bangor
McCullough, J. F.	Orono
McCullough, Mrs. J. F.	Orono
McKee, Mrs. R. H.	Orono
McKeen, B. W.	Fryeburg
McPheters, Annie	Veazie
Mahoney, Mrs. W. C.	Northport
Martini, Charles	Orono
Mayo, E. P.	Fairfield
Mayo, Mrs. George	Orono
Mayo, R. F.	Bradley
Merrill, A. L.	Auburn
Merrill, H. S.	Orono
Merrill, H. T.	Sabbathday Lake
Merrill, Mrs. S. E.	Stillwater
Merriman, O. P.	Orono
Mitchell, F. H.	Waterville
Mitchell, Reves	Bangor
Moore, W. C.	Bangor
Morey, Francina	Pittsfield
Morrison, Ida	Orono
Morrison, R. V.	Bangor
Morrison, Stella	Orono
Mosher, H. S.	Wilton
Mosher, L. W.	Wilton
Moulton, Mrs. B. H.	Orono
Mower, I. B.	Waterville
Mudgett, Mary	Bangor
Nason, B. L.	Kenduskeag
Nealley, E. R.	Brewer
Nealley, Meldon	Brewer
Nickerson, Mary	Sheepscott
Oak, Mrs. J. M.	Bangor
Orr, G. E.	Bangor
Packard, H. D.	Canton
Page, E. D.	Hermon
Page, W. N.	Kenduskeag
Palmer, C. R.	Dexter
Park, Mrs. T. I.	Orono
Patch, Mrs. W. Y.	Bangor
Patten, R. T.	Skowhegan
Patten, Mrs. R. T.	Skowhegan
Payson, F. L.	Rockland
Peabody, W. J.	Exeter
Perkins, Mrs. Caroline	Orono
Perkins, C. L.	Bucksport
Perkins, F. G.	Bucksport
Peters, W. C.	Bangor
Peters, Mrs. W. C.	Bangor
Pierce, Mrs. David	Bradford
Pierce, Mrs. H. E.	Bangor
Pike, C. L.	Lubec
Piper, Harold	E. Troy
Plummer, George	Charleston
Pope, C. S.	Manchester
Porter, Mrs. J. J.	Bangor
Potter, B. H.	Wytopitlock
Potter, D. H.	Stillwater
Potter, F. A.	Old Town
Potter, Mrs. F. A.	Old Town
Prince, D. C.	Turner
Prince, Mrs. W. E.	Orono
Rand, E. B.	Unity
Redman, R. W.	Augusta
Redman, W. S.	Newport
Reed, D. S.	Orono
Reed, Mrs. D. S.	Orono
Reed, E. A.	Orono
Reed, Mrs. L. J.	Orono
Richardson, C. L.	Old Orchard
Richardson, H. M.	Bangor
Richardson, G. H.	Old Town
Ricker, W. J.	Turner
Ring, Mrs. E. E.	Orono

Ring, Mrs. E. T. Orono
Robbins, Harry Stillwater
Roberts, J. A. Norway
Robinson, E. E. Bangor
Robinson, E. W. Bangor
Robinson, Mrs. E. W. Bangor
Rogers, C. A. Searsport
Rolfe, A. H. Stillwater
Rolfe, W. V. Stillwater
Rowe, E. M. Hampden
Rowe, Mrs. H. W. Brewer
Royal, W. A. Bangor
Russell, Mrs. M. E. Orono
Ryan, Mrs. S. P. Orono
Sanford, L. L. Skowhegan
Sanders, Marshall Hallifax, N. S.
Savage, Mrs. C. H. Bangor
Sawtelle, A. M. Orono
Sawyer, Alice Brewer
Sawyer, Edith Bangor
Sawyer, Mabel Bangor
Scribner, W. E. Monroe
Sewall, Mrs. J. W. Old Town
Shackley, J. A. W. Old Town
Shand, C. L. Bar Harbor
Sherwin, Mrs. M. E.
W. Raleigh, N. C.
Sibley, B. H. Stillwater
Sibley, J. H. Stillwater
Simmons, Mrs. G. E. Orono
Skofield, P. F. Houlton
Small, J. W. Northeast Harbor
Smith, A. B. Brewer
Smith, B. B. Bangor
Smith, C. A. Orono
Smith, C. B. Washington, D. C.
Smith, Mrs. Ira Bangor
Smith, L. H. South Brewer
Smith, W. B. Bangor
Snow, H. A. Orono
Spaulding, C. I. Perham
Spearen, Mrs. E. A. Orono
St. Peter, Susan Orono
Stanford, E. A. Kennebunk
Stanford, Mrs. E. A. Kennebunk
Stanislaus, Francis Lincoln
Stetson, C. S. Greene
Stetson, S. N. E. Sumner
Stevens, Edwin Orono
Stevens, Mrs. George Orono
Stevens, Mrs. J. S. Orono
Storman, Marjorie Stillwater
Surface, Mrs. F. M. Orono
Swazey, J. N. Lincoln
Tarr, L. G. Mapleton
Taylor, Mrs. F. H. Bangor
Taylor, F. W. Durham, N. H.
Taylor, J. M. Hermon
Temple, Marion Bangor
Terrill, Myrtle Old Town
Thomas, L. A. Monson
Thomas, Mrs. L. A. Monson
Thomas, S. E. Dover
Thomas, W. G. Dover
Thompson, Alice Waltham, Mass.
Thompson, Mrs. G. W. Orono
Thompson, J. A. Bangor
Toothacker, F. L. Belfast
Tower, Mrs. G. E. Salem, Ore.
Towle, E. C. Bangor
Towle, Maud Bangor
Treadwell, Mrs. S. G. Brewer
Tucker, Benj. Norway
Tucker, Mrs. E. M. Norway
Turnery, A. G. Fredericton, N. B.
Tusker, Etta Orono
Vail, Alice B. Bangor
Vaughan, Wm. Jr. Belfast
Vickery, Mrs. L. F. Orono
Walden, H. G. Greenville
Walker, A. G. Canton
Wardley, Mrs. C. J. Bangor

Ware, G. A.	Bangor	White, E. I.	Machias
Watkins, C. D.	So. Casco	Whitmore, A. J.	Bangor
Webb, Mrs. Alfred	Bangor	Whitney, Mrs. Frank	Bangor
Webb, Emma	Bangor	Whitney, Sarah	Kenduskeag
Webber, Mrs. C. B.	Orono	Willard, Mary	Old Town
Weeks, T. S.	Benton Station	Wing, Mrs. H. R.	Orono
Weld, E. C.	Old Town	Wolvin, J. G.	E. Holden
Weld, Mrs. G. G.	Old Town	Wood, Amy	Old Town
Wentworth, H. M.	Orono	Woodard, W. H.	Stillwater
Wescott, Mrs. G. R.	Bangor	Woodard, Mrs. W. H.	Stillwater
Weston, Annie G.	Old Town	Woods, Mrs. C. D.	Orono
Weymouth, A. J.	Brewer	Woods, H. M.	Orono
Weymouth, W. S.	Brewer	Woods, S. E.	Old Town
Wheelock, W. J.	Bangor	Young, E. C.	Bangor
White, Mrs. E. H.	Orono	Young, Gertrude	Brewer

STUDENTS WHO HAVE BEEN ENROLLED IN THE CORRESPONDENCE COURSE SINCE DECEMBER 1, 1909.

Abbott, S. E.	Bethel	Cook, R. M.	Monmouth
Abbott, W. M.	Waterford	Covell, Eliza	Skowhegan
Adams, Arthur	Richmond	Cushman, E. H.	Portland
Adams, R. W.	Ashland	Davis, F. E.	Madison
Allen, E. D.	Boston	Davis, I. G.	Auburn
Barclay, C. L.	Dorchester, Mass.	Day, A. P.	West Kennebunk
Bardwell, F. A.	Boston, Mass.	Dixon, J. C. Jr.	Rochester, N. H.
Barney J. E.	Canaan, N. H.	Dodge, C. R.	Bridgton
Beckwith, Blanche	Presque Isle	Dodge, R. B.	Machias
Bennett, A .A.	Jefferson	Dunn, G.	Norway
Boston, L. B.	Fort Kent	Eastman, A. A.	Dexter
Brackett, K. K.	Dixfield	Eastman, O. C.	
Bradford, F. C.	Stillwater	Elder, G. K.	Lewiston
Bragdon, G. D.	Kennebunk	Elkins, L. W.	E. Boothbay
Brown, A. H.	Dover	Faught, Florence,	Augusta
Buzzell, W. M.	Mt. Vernon	Fenn, G. A.	Springfield, Mass.
Chase, L. H.	Foxcroft	Forbes, C. R.	Brighton
Clements, E. F.	Monroe	Fox Selden	South Portland
Clements, N. M.	Woodfords	Getchell, F. S.	Foxcroft
Clough, Charlotte,	Winthrop Ctr.	Getchell, H. P.	Foxcroft

Gilson, A. M. Winthrop
Goodwin, C. I. Bedford Hills, N. Y.
Goodwin, J. H. E. Lebanon
Goodwin, M. L. Charleston
Gosline, A. N. Gardiner
Greene, E. S. Vinalhaven
Greene, Owen Vinalhaven
Greene, R. J. Grays River, Wash.
Grindle, B. W. N. Brooksville
Grindle, H. T. No. Sedgwick
Grover, A. L. Orono
Ham, H. H. N. Berwick
Hamlin, C. A. S. Waterford
Hamlin, M. E. Harrison
Harriman, H. N. Sebago Lake
Haskins, G. N. Bar Harbor
Hatch, H. D. S. Brewer
Hayden, F. L. Abbott Village
Hayden, W. M. Guilford
Henley, E. C. N. Waterford
Hill, F. C. Fairhaven, Mass.
Hilt, Esther N. Anson
Hilton, M. E. Athens
Hilton, W. A. Athens
Holman, W. H. Bangor
Hoyt, M. H. Manchester, N. H.
Humphrey, W. R. Auburn
Jenkins, W. R. S. Waterford
Jerris, F. L. Portland
Kwotkin, B. E. Hardwick, Vt.
Ladd, H. B. E. Boothbay
Landry, N. L. Rumford
Leland, C. R. Mechanic Falls
Leland, C. E. Mechanic Falls
Lewis, F. E. Castine
Locke, Alice, Redlands, Calif.
Lord, E. E. Fairfield
Luce, H. J. S. Newburg
McIntyre, J. D. Somerville, Mass.
Martin, L. A. Belfast
Millett, E. G. Waterford
Nason, L. A. Bangor
Nichols, R. L. Anson
Nickerson, M. A. Winthrop
Noble, M. E. S. Waterford
Ordway, A. L. Medford, Mass.
Parsons, J. C. Lincoln
Peters, G. A. New Bedford
Read, J. R. Newport
Read, Theodore, Cambridge
Reed, P. A. Auburn
Reed, P. W. Gardiner
Rees, Alfred E. Monroe, O.
Ring, H. A. Sisco, Fla.
Rogers, Florence Veazie
Rowe, C. H. New York City
Rowe, Mabel New Sharon
Russell, A. W. Bangor
Russell, D. E. Orono
Sanborn, A. M. Calais
Sanderson, A. L. S. Waterford
Sanderson, M. S. Waterford
Severance, D. E. Bangor
Shattuck, F. I. Readfield
Small, B. R. Litchfield
Small, E. M. Litchfield
Smith, H. W. Sebago Lake
Snow, H. M. Lisbon Falls
Snow, L. R. Lisbon Falls
Soule, C. H. S. Freeport
Stackpole, W. T. Thomaston
Stanton, Harold Beverly
Stiles, E. W. Springvale
Strout, H. L. Kezar Falls
Thomas, R. S. Baileys Island
Tobey, G. W. Jefferson
Tolman, E. D. Rockland
Towle, A. C. Waterville
Tyler, C. E. Lewiston
Varnum, True Brookton
Wade, E. M. Augusta
Walton, H. B. Belfast
Wilder, C. S. E. Longmeadow Mass.
Wilson, H .M. Cumberland Ctr.
Woodbury, E. S. Houlton

GENERAL SUMMARY

Faculty

President	1
Professors	39
Associate Professors	6
Assistant Professors	12
Instructors	27
Lecturers	7
Tutors	2
Assistants and Other Officers	4
Additional Instructors in the Summer term	4
Total	102
Other Officers	22
College of Arts and Sciences	46
College of Agriculture	42
College of Technology	51
College of Pharmacy	34
College of Law	14
Agricultural Experiment Station	26

Members of the general faculty are included in the faculties of the separate colleges when they give courses which are required therein.

Students

Graduate Students	14
Seniors	114
Juniors	107
Sophomores	100
Freshmen	161
Special Students	37

Short Pharmacy, Second Year	9	
First Year	9	18
Teachers' Course in Agriculture		1
School Course in Agriculture, Second Year	9	
First Year	36	45
Summer Term		154
Winter Courses in Agriculture		12
Winter Courses in Poultry Management		30
Winter Courses in Horticulture		22
College of Law, Graduate Students	28	
Seniors	20	
Juniors	17	
First Year	22	
Special Students	16	103
		918
Duplicated		60
Total		858

Classification by Residence.

Maine, by counties:		
Androscoggin	45	
Aroostook	23	
Cumberland	75	
Franklin	21	
Hancock	33	
Kennebec	31	
Knox	14	
Lincoln	8	
Oxford	35	
Penobscot	217	
Piscataquis	19	
Sagadahoc	8	
Somerset	28	
Waldo	19	
Washington	38	
York	47	661
Connecticut	8	

Georgia	1	
Massachusetts	136	
Michigan	1	
New Hampshire	20	
New Jersey	1	
New York	10	
Oregon	1	
Pennsylvania	1	
Rhode Island	3	
Vermont	5	
Virginia	1	
Washington	1	189
Armenia	1	
China	7	8
		858

Classification by Colleges.

College of Arts and Science	195
College of Agriculture	206
Collegeof Technology	335
College of Pharmacy	19
College of Law	103
	858

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DUPLICATE

THE MAINE BULLETIN

VOL. XIV OCTOBER, 1911 NO. 2

CATALOG

OF THE

UNIVERISTY OF MAINE

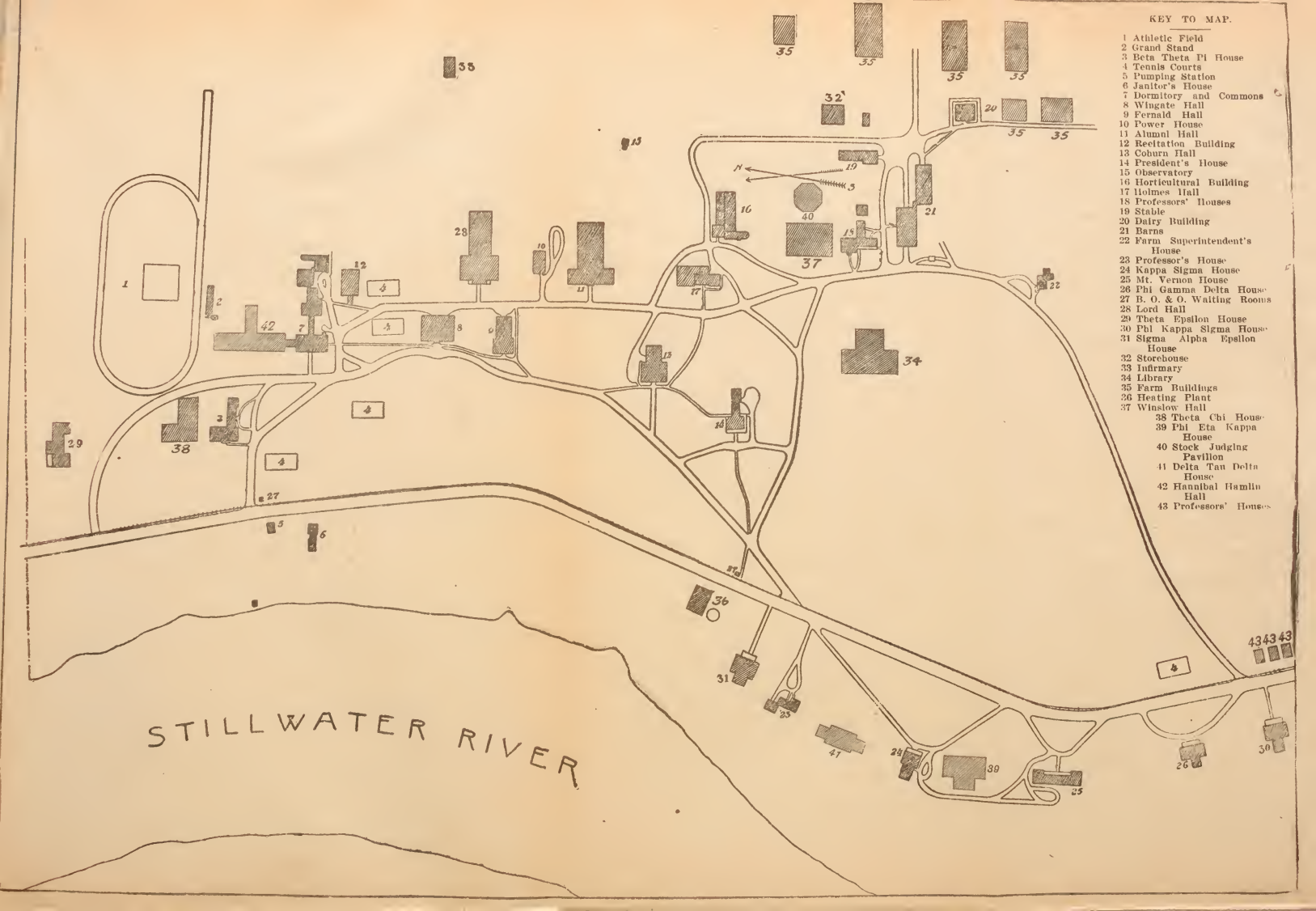
1911-1912

Published Monthly by the University

Entered at the Post Office at Orono, Maine, as second-class matter

HEALTH

THE
JOHN CRERAR
LIBRARY


KEY TO MAP.
1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Dormitory and Commons
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' Houses
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
42 Hannibal Hamlin Hall
43 Professors' Houses
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1911-1912

ORONO, MAINE

WATERVILLE
SENTINEL PUBLISHING COMPANY
1911

1911	1912	1912	1913

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CALENDAR

FALL SEMESTER, 1911

September 15-19 inclusive,		Arrearage examinations.
September 15-19 inclusive,		Entrance examinations.
September 20,	Wednesday,	Registration begins, 1.30 P. M.
September 21,	Thursday,	Fall semester begins, 1.30 P. M.
October 12,	Thursday,	Columbus day, a holiday.
November 28,	Tuesday,	Meeting of the Board of Trustees.
November 29,	Wednesday,	Thanksgiving recess begins, 5.10 P. M.
December 4,	Monday,	Thanksgiving recess ends, 12.00 M.
December 8,	Friday,	Sophomore prize declamations.
December 22,	Friday,	Christmas recess begins, 5.10 P. M.

1912

January 2,	Tuesday,	Christmas recess ends, 8.00 A.M.
February 2,	Friday,	Fall semester ends, 5.10 P. M.

SPRING SEMESTER, 1912

February 3,	Saturday,	Registration.
February 5,	Monday,	Spring semester begins.
February 22,	Thursday,	Washington's birthday, a holiday.
April 1,	Monday,	Spring recess begins, 7.45 A. M.
April 8,	Monday,	Spring recess ends, 7.45 A. M.
April 19,	Friday,	Patriots' day, a holiday.
May 1,	Wednesday,	An outline of Theses must be passed in to the Major Instructor.
May 30,	Thursday,	Memorial day, a holiday.
June 3,	Monday,	Completed Theses must be deposited at the Library, 12.00 M.
June 5-8,		Entrance examinations.
June 5,	Wednesday,	8.00 A. M. Algebra. Elementary Algebra (Short Pharmacy). 10.00 A. M. Chemistry. Botany. 1.30 P. M. Latin. 4.30 P. M. Roman History.
June 6,	Thursday,	8.00 A. M. Arithmetic (Short Pharmacy). Solid Geometry.

			10.00 A. M. French.
			German.
			Geography (Short Pharmacy).
			1.30 P. M. English.
			English Grammar (Short Pharmacy).
			4.30 P. M. English History.
June	7,	Friday,	8.00 A. M. American History and Civil Government.
			American History (Short Pharmacy).
			Trigonometry.
			10.00 A. M. Plane Geometry.
			1.30 P. M. Physics.
June	8,	Saturday,	8.00 A. M. Greek.
			Physiology.
			10.00 A. M. Greek History.
			1.30 P. M. Physiography.
June	9,	Sunday,	Baccalaureate address.
June	10,	Monday,	Class day.
			Reception by the President.
June	11,	Tuesday,	Meeting of the Board of Trustees.
			Commencement dinner.
			Reception by the fraternities.
			Alumni luncheon; alumnæ luncheon.
			Meeting of the Alumni Association.
June	12,	Wednesday,	COMMENCEMENT.
			Commencement ball.

SUMMER TERM

June	26,	Wednesday,	Summer term begins.
August	6,	Tuesday,	Summer term ends.

FALL SEMESTER, 1912

September	13-17,		Arrearage examinations.
September	13-17,		Entrance examinations.
September	13,	Friday,	8.00 A. M. Algebra.
			Elementary Algebra (Short Pharmacy).
			10.00 A. M. Chemistry.
			Botany.

		1.30 P. M. Latin.
		4.30 P. M. Roman History.
September 14,	Saturday,	8.00 A. M. Arithmetic (Short Pharmacy). Solid Geometry.
September 14,	Saturday,	10.00 A. M. French. German. Geography (Short Pharmacy.)
		1.30 P. M. English. English Grammar (Short Pharmacy).
		4.30 P. M. English History.
September 16,	Monday,	8.00 A. M. American History and Civil Government. American History (Short Pharmacy). Trigonometry.
		10.00 A. M. Plane Geometry.
		1.30 P. M. Physics.
September 17,	Tuesday,	8.00 A. M. Greek. Physiology.
		10.00 A. M. Greek History.
		1.30 P. M. Physiography.
September 18,	Wednesday,	Registration begins, 1.30 P. M.
September 19,	Thursday,	First Chapel service, 11.00 A. M.
October 12,	Saturday,	Columbus Day, a holiday.
November 26,	Tuesday,	Meeting of the Board of Trustees.
November 27,	Wednesday,	Thanksgiving recess begins, 5.10 P. M.
December 2,	Monday,	Thanksgiving recess ends, 12.00 M.
December 6,	Friday,	Sophomore prize declamations.
December 22,	Sunday,	Christmas recess begins, 5.10 P. M.

1913

January 2,	Thursday,	Christmas recess ends, 8.00 A. M.
January 31,	Friday,	Fall semester ends, 5.10 P. M.

SPRING SEMESTER, 1913

February 1,	Saturday,	Registration.
February 3,	Monday,	Spring semester begins.
June 11,	Wednesday,	COMMENCEMENT.

CALENDAR OF THE COLLEGE OF LAW

1911

October 4, Wednesday, Fall term begins.
December 20, Wednesday, Fall term ends.

1912

January 3, Wednesday, Winter term begins.
March 13, Wednesday, Winter term ends.
March 20, Wednesday, Spring term begins.
June 12, Wednesday, COMMENCEMENT.
October 2, Wednesday, Fall term begins.
December 18, Wednesday, Fall term ends.

1913

January 1, Wednesday, Winter term begins.
March 12, Wednesday, Winter term ends.
March 19, Wednesday, Spring term begins.
June 11, Wednesday, COMMENCEMENT.

THE BOARD OF TRUSTEES

Hon. WILLIAM THOMAS HAINES, B. S., LL. B., LL. D., President	Waterville
Term expires April 24, 1913	
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Term expires April 16, 1914	
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64 Grove Street, Bangor
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*Absent on leave from September 1, 1911, to September 1, 1912.

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Jones, (R. K.), Bean, Boardman, Jones (A. J.), Wingard

Attendance

Brown (C. B.), Craig, Stephens

Auditing

Merrill (L. H.), Russell, Segall, Woodman

Chapel

Stevens, Merrill (L. H.), Simmons, Thompson (G. A.)

Commencement
Woods, Canong, Jones (R. K.), Merrill (L. H.)

Delinquent Students
Boardman, Campbell, Chrysler, Segall

Employment
Merrill (L. S.), Carter, Gannett

Fitting Schools
Gray, Chase, Hart, Jones (A. J.)

Health
Wingard, Comstock, Jackman

Honors
Chryster, Briscoe, Easley, Thompson (G. W.)

Library
Jones (R. K.), Gray, Jones (A. J.)

Organizations Other Than Athletics
McKee, Boardman, Ganong

Publications
Stevens, Jones (R. K.)

Rules
Jewett, Hart, Merrill (L. S.)

Schedule
Weston, Balentine, Hamlin, Reed

Social Affairs
Huddilston, Colvin, Grover, Hitchings, Raggio

Student Affairs
Hart, Boardman, Merrill (L. S.), Stevens, Varnum, Walz

GENERAL INFORMATION

HISTORY

By an Act of Congress, approved July 2, 1862, by President Lincoln, it was provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out the purposes of the act.

Maine accepted this grant in 1863 and in 1865 constituted a body politic and corporate by the name of the Trustees of the State College of Agriculture and the Mechanic Arts. By an act of the legislature of 1897 the name of the institution was changed to the University of Maine.

ENDOWMENT AND INCOME

The State of Maine received by the act of Congress above referred to 210,000 acres of public land from which an endowment fund of $118,300 was realized. Former Governor Abner Coburn, of Skowhegan, for many years President of the Board of Trustees, made a bequest of

$100,000 to the institution. These two funds yield respectively 5% and 4% annually.

Under Acts of Congress, approved August 30, 1890, and March 4, 1907, the University receives $50,000 annually from the United States Government.

Under an Act of the Legislature, approved April 2, 1909, the University receives $100,000 for each of the years, 1909, 1910, 1911, and 1912, for buildings and maintenance. Student fees and miscellaneous receipts complete the income.

Under Acts of Congress approved March 2, 1887 and March 17, 1906, the University receives $30,000 annually for the maintenance of the Agricultural Experiment Station.

LOCATION

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, an arm of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the state.

The cars of the Bangor Railway and Electric railroad run through the university grounds. Visitors may find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located at the corner of Union and Second streets, Bangor.

THE BUILDINGS AND THEIR EQUIPMENT

Alumni Hall.—Alumni Hall was erected in 1900. The front part contains on the ground floor the offices of the President, the Dean of the University, the Secretary, the Cashier, the Trustees' Room, and two recitation rooms for the use of the mathematical department; the second floor contains the university chapel with a large pipe organ in the choir gallery, and the drill hall and gymnasium with a running track in the gallery. The dimensions of the drill hall and gymnasium are 100 x 62 feet. This room is encircled by a 9-foot running track suspended from the roof. As a gymnasium it is equipped with complete apparatus of the most approved kind. Under the drill hall are the offices of the military

instructor and the physical director, the baseball cage, lockers, lavatories, store rooms, etc.

This building also contains the university postoffice.

Coburn Hall.—Southwest of Alumni Hall is Coburn Hall, named in honor of Abner Coburn, of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. In the basement are located a laboratory for animal and plant physiology, the taxidermist's laboratory, and the university store. Connected with the basement is a small greenhouse for the use of the biological department. On the first floor are three recitation rooms, a research zoölogical laboratory, and part of the museum. On the second floor are the botanical and zoölogical laboratories and lecture room and part of the museum. On the third floor are recitation rooms for the departments of economics, philosophy, and German; the psychological laboratory; and the remainder of the museum.

Estabrooke Hall.—This is a wooden building used for the work of the department of English. It consists of four recitation rooms for large sections, two smaller rooms for consultation purposes, and four offices for members of the faculty. The building takes its name from the late Professor Horace Melvyn Estabrooke, who was the head of the department of English for eighteen years.

Fernald Hall.—This building, named in honor of Merritt C. Fernald, LL. D., President of the University from 1879 to 1893, is a two-story brick building, containing seventeen rooms devoted to the departments of chemistry and pharmacy. The balance rooms, a small lecture room, three offices, and the laboratory for advanced students are on the ground floor. Upon the second floor are the large lecture room, the laboratory for freshman work, a recitation room, an office, and the supply room. Under the roof are arranged the mineralogical laboratory, dark rooms, and a laboratory for qualitative analysis. An assay laboratory, a laboratory for water and gas analysis, a room for work in physical chemistry, and store rooms are in the basement.

Holmes Hall.—This is a two-story brick building, 81 x 48 feet, standing south of Alumni Hall. It is occupied by the Maine Agricultural Experiment Station and is arranged as follows:

On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, drugs, and fertilizers; the laboratory for vegetable pathology; and the biological laboratories. The general office and mailing room, the director's office, the laboratory for seed

testing and photography, the entomological laboratories, and the library are on the second floor.

In the basement are rooms for the boiler, for the gas machine, for the grinding and preparation of samples, and for the calorimeter; culture and preparation rooms used by the plant pathologist, and rooms for the storage of fuel, chemicals, and glass ware. The large attic is used for the storage of samples and supplies. The building is connected with the steam heating plant, supplied with gas and electricity, and is thoroughly equipped with apparatus for the work of agricultural investigation.

An attached greenhouse is used by the entomologist and plant pathologist.

Lord Hall.—This building, named in honor of Honorable Henry Lord, Ex-President of the Board of Trustees, is designed for the departments of mechanical and electrical engineering. It consists of a main part, 82 x 56 feet in area and two stories in height, and an ell, 125 x 42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc. For tests of materials there are two Riehle power operated testing machines, one of 60,000 lbs. capacity, for tensile, and compressive tests, and one of 150,000 lbs. capacity for tensile, compressive, and transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necssary for the study of engine performance.

The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. These are all well equipped. The forge shop had complete new apparatus installed a few years ago. The forges are of the Sturtevant down draft type. New benches and new lathes have just been installed in the pattern shop, and also new lathes of the highest type in the machine shop.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volt alternating current system to direct current by means of rotary converters and belted alternating current motors driving direct current generators. In addition to volt-meters, ammeters, and watt-meters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7½ kilowatt special

auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Wingate Hall.—One of the most conspicuous buildings on the campus, Wingate Hall, named in honor of William P. Wingate, of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied chiefly by the departments of civil engineering, physics, and mechanics and drawing. On the ground floor are four recitation rooms, instrument rooms, an optical room, and the offices of the professors of civil engineering and mechanics and drawing. On the second floor are the offices and recitation rooms of the professors of physics, Greek, and Latin, two physical laboratories, and the physical apparatus rooms. On the third floor are two large, well lighted drawing rooms for the use of the departments of civil engineering and mechanics and drawing, and a filng room containing a collection of blue prints belonging to the department of civil engineering. In the basement are the electrical laboratory and the photometer room of the department of physics, and the cement testing laboratory. On the fourth floor is another photometer room for the use of students in physics. Meteorological records for the United States Government are kept in this building.

Winslow Hall.—The Agricultural Building is the largest building on the campus. It was named in honor of Honorable E. B. Winslow, Ex-President of the Board of Trustees. The ground plan measures 63 x 100 feet and the building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors including a well lighted basement for lecture rooms and laboratories.

On the first floor are the offices of the Dean of the College of Agriculture, the faculty room and library, the offices and class rooms of the professors of agricultural chemistry, animal industry and farm management, and the office and filing room of the extension department.

On the second floor are the offices of the departments of agronomy, forestry, and domestic science; the agronomy and forestry lecture rooms; farm crops laboratory with seed and plant storage rooms; bacteriological

laboratory; and the kitchen and dining room of the department of domestic science.

Across the front of the building on the third floor are the office, class room, refrigerator, and laboratories of the department of horticulture. The remaining half of this floor is occupied by a large lecture room and two draughting rooms separated from the larger room by folding doors, so that the three rooms can be thrown into a large auditorium.

The basement is built high above the grade line so that light and ventilation are good. It contains the office, lecture room, and operating room of the department of veterinary science, timber testing laboratory, a dry kiln, and a wood storage room for forestry, the agricultural chemistry laboratory, soil physics laboratory, a spraying laboratory, a laundry for the department of domestic science, and dark rooms for photography.

The interior finish and furniture are in dark mission stain, and the building is equipped with electric lights, elevator, hot and cold water, gas, and high pressure steam for laboratory work.

Library.—The library was completed in 1906. For its erection and furnishing the sum of $55,000 was given by Mr. Andrew Carnegie.

The building is two stories above a basement which is almost entirely above the ground level. The stacks are in the rear of the main building, and have a capacity of 75,000 volumes, with a cataloging room on the first floor, opening from the librarian's office. The first floor of the main building contains an entrance hall, open to the dome; on one side is a periodical room, in the rear of which is a room for reserved books, and on the other side is a reference room which leads to the librarian's office; there is also a women's room on this floor. The second floor has a gallery surrounding a central open space, and on its walls, and in the entrance hall below, are the art collections; on the second floor also are a lecture hall, with a seating capacity of one hundred and twenty-five and five seminar rooms. The basement contains a newspaper room, a club room in which meetings of various student organizations are held, a janitor's room, a store room, and a men's room.

The library is well lighted and thoroughly ventilated. Each floor of the stacks and each seminar room is connected by an intercommunicating telephone system with the librarian's office, the assistant's desk, and the janitor's room; and the librarian's office has telephone connection with the Orono exchange.

College of Law Building.—This building is situated in Bangor, corner of Union and Second Streets, and dedicated to the use of the Col-

lege of Law. It is in one of the finest parts of the city, on the car line, in a very quiet neighborhood, and within a few minutes' walk from the Court House, the Y. M. C. A., the business section of the city, the hotels, the postoffice, and the M. C. R. R. Station.

The grounds, surrounding the building, occupy nearly a whole square. They are surrounded by beautiful elms and afford ample space for tennis courts.

The building itself is a brick, granite, and slate structure, three stories high. There are twelve rooms in the main part of the building, large, commodious, and well lighted. Those on the first floor will be used as recitation rooms and are, for the most part, finished in mahogany. The reception hall, as well as the staircase leading to the second and third floors, are all of mahogany. There are four large rooms on the second floor to be devoted to library and office purposes, and four rooms on the top floor, one large enough to constitute a fine dormitory hall. The building contains four handsomely finished bath rooms, and there are a number of fine rooms in the ell. The building is lighted and heated throughout by gas and steam heat.

The Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a combined transit instrument and zenith telescope of three-inch aperture recently constructed by Bomberg, and a Respold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

The Dairy Building.—The Dairy Building 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese-curing room, and a testing laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is supplied with hot and cold water. Power is furnished by a six horse-power engine.

The Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. The building is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

The Poultry Plant.—The poultry plant of the College of Agriculture consists of a two and a half story building, 25 x 40 feet, the lower

portion of which is designed for an incubator room and is built of brick with non-conducting walls. On the upper floors is located a poultry apparatus laboratory. Attached to this buildings is a brooder house, 15 x 40 feet, for winter brooding. It is equipped with a hot water heater. The fattening and killing house is 14 x 45 feet, with an interior arrangement to demonstrate crate fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room, and is equipped with water heater and cooling tanks. The several breeds of poultry kept by the College of Agriculture are housed in colony houses of various styles and sizes, and one long laying-house, 14 x 96 feet, divided into twelve pens especially adapted for instructional purposes.

The poultry plant belonging to the Experiment Station contains an incubator house 31 x 31 feet, with tenenment above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two-story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2500 chicks.

The Stock Judging Pavilion.—Located about fifty feet to the rear of the Agricultural Building is an octagonal structure fifty feet in diameter. It is built of materials similar to the large building and is used for scoring and judging stock. In the center of the structure is a ring twenty-five feet in diameter, and surrounding this ring are six rows of seats arranged in amphitheatre style. The building has a seating capacity of about six hundred and can be used for meetings too large for any of the rooms in the Agricultural Building.

The Farm Buildings.—The lower barn, 100 x 50 feet, contains a cow stable with 26 stalls two grain rooms, three bull rooms, and silo; and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, and an electric motor for power. The barns are lighted by electricity and supplied with water and steam. The basements of the barns contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, is of special design and contains six large pens, a nursery, and a storage room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery. The upper floor of one is used as a laboratory for classes in farm machinery.

A modern piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed-cooking rooms.

A ten-room farm cottage, occupied by the men employed in the different departments comprising the College of Agriculture, has also been erected.

The farm of the University of Maine is composed of two parcels of land aggregating 473 acres, of which 120 acres are under cultivation. The cultivated land is handled according to a definite system of rotation of crops, including hoed crops, nurse crops, and hay crops. Such grains as oats, barley, rye, and wheat are grown extensively, and potatoes and corn form a large part of the crops of the farm. The hay acreage cuts considerably more than 100 tons annually. The fertility of the land is maintained by applications of lime, barnyard dressing, commercial fertilizers, and by the turning under of green crops once in four years. It is the aim of the management to make the farm support the live stock maintained upon it. The areas of permanent pasture land form a considerable part of the farm and the remainder of it is given up to forest and orchard areas. Highmoor Farm, purchased by the State Legislature for the use of the Experiment Station, is described under that department of the University.

Hannibal Hamlin Hall.—The new dormitory is a brick building with stone trimmings, located north of Oak Hall and connected with it by a covered passage. The building is 35 feet wide and 168 feet long. It has four stories founded on a high, well lighted concrete basement, in which are located a dining room 32 x 90 feet, recreation room 26 x 32 feet, waiters' room 12 x 18 feet with lavatory, toilet, and locker room, and room for training table 12 x 26 feet. In a one-story ell adjoining the basement is the kitchen 32 x 34 feet, with pantry, ice room, coal room, toilet room, and closet. From the basement up, the building is separated into three sections by two 12-foot brick fire walls, which extend up through the roof. Each section has its own entrance, vestibule hall, and corridor. The first story of the central section has a reception hall and living room, with bath, lavatory, and shower bath on one side of the corridor, and on the other side the Y. M. C. A. rooms with toilet and lavatory. The central section in the second, third, and fourth stories is divided in each story into four chambers, with shower bath and lavatories. The two end sections in each of the four stories are divided into four suites of two bedrooms and a study room, with a toilet, lavatories, and shower bath for the use of the four suites. The building is covered with a tar and gravel roof. The inte-

rior is of ash; the floor is hard wood, with the exception of the kitchen, which has a cement floor, and the toilets, which have terrazzo floors. The walls are decorated with paper. The building is heated by steam and lighted by electricity. There are 96 rooms in the two end sections and 17 in the central section, making a total of 113 rooms above the basement. Each bedroom has an ample clothes closet.

The Mt. Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings upon a site overlooking the campus, and commands a beautiful view of the river, villages, and hills. It is two stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor, dining-room, kitchen, bath-room, and ten study rooms, intended for two students each. The rooms are large, well lighted, heated by steam, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. The Mt. Vernon House is under the supervision of a superintendent.

Oak Hall.—In the northern part of the campus is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak, of Garland, for many years a member of the board of trustees. It contains forty-nine rooms for students, and is furnished with bath rooms. It is heated by steam, supplied with water, and lighted by electricity.

The Infirmary.—A small wooden building has been erected on the back campus, to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for women, as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Central Heating Plant.—The central heating station is located across the car tracks from the university buildings, just above the Sigma Alpha Epsilon house, and on low ground so that practically all the buildings to be connected will drain by gravity to the plant, thus saving the pumping or lifting of the returns.

The station is a plain red brick structure, without any attempt at ornamentation, but of good proportions, and large enough to provide room for present needs and allow for considerable future extensions.

The pump pit is 8 x 17½ feet, the engine room 17½ x 40 feet, the boiler room 40 x 42 feet, and the proposed coal pocket 32 x 42 feet.

The chimney is 100 feet high, and 60 inches in diameter. It is of radial brick construction and stands on a solid ledge. The station equipment consists of four 72-inch boilers, 17 feet 6 inches long, with 16 foot tubes. They are of butt joint construction, with double cover strips, and capable of running 150 lbs. pressure if necessary. In connection with the boiler plant there are two 6 x 4 x 6 inch boiler feed pumps, with receiving tank, for handling the return water of condensation as it comes back from the buildings, and putting it into the boilers. All necessary provisions have been made for the future installation of engines and generators to furnish light and power for the University when practicable. This plant supplies heat to nearly all the university buildings.

The Power House.—This wooden building, 30 x 56 feet, north of Alumni Hall, formerly the power and heating plant of the University, is now used exclusively for laboratory purposes in connection with the department of mechanical engineering. It contains two boilers, a one hundred and fifty horse-power Babcock and Wilcox and an eighty-five horse-power Heine, a fifty horse-power Corliss engine, a fifteen horse-power Otto gasolene engine, a plain slide valve engine, and two dynamos with operating switchboard.

The Fraternity Houses.—Eleven of the student fraternities occupy club houses. Nine of the houses are on the campus, and two in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. The fraternities maintain their own boarding establishments.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, and six residences occupied by members of the faculty.

The Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus, about 1,200 feet from the gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and field athletics.

THE LIBRARY

The library contains over forty-five thousand bound volumes and over ten thousand pamphlets, and includes the library of the Experiment Station, which contains about two thousand five hundred volumes, and

that of the College of Law, which contains about three thousand volumes. Reference libraries are maintained in departmental rooms by those departments which require them.

More than half the volumes in the library have been added within the last ten years. Accessions average about 2,500 annually, and the greater portion of these are acquired by purchase. For the most part purchases are made of books selected by heads of departments, and this method results in a collection of great working value.

The library is classified according to the Dewey system, slightly modified; there is a card catalog arranged by authors and subjects; access to the shelves is entirely unrestricted. Students may borrow three volumes at a time, to be retained three weeks, when they may be renewed unless previously called for; special permission to borrow a larger number may be obtained, when necessary, upon application to the librarian. There is a fine of two cents a day for books kept over time. Officers and alumni of the University may borrow any reasonable number of volumes without time limit, except that all books must be returned at least nine days before Commencement, and the return of any volume may be required at any time by the library committee. Other responsible persons may obtain the privileges of the library upon application to the Librarian. The Librarian and his assistants are glad to give advice and help at any time.

THE MUSEUM OF NATURAL HISTORY

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building.

Geological Collections.—These collections, occupying the upper floor of the wing of Coburn Hall, are accessible daily during the college year except on Saturdays and Sundays. They include the more important fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the state; a general collection of more common minerals; a collection of economic minerals furnished by the U. S. National Museum; an educational series of rocks furnished by the U. S. Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the state may be made of great value, both from the scientific and economic standpoint. Students and others residing in the state are urged to contribute specimens from their home localities. Recently valuable accessions have been received from the United States National Museum.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formaline material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the state; a small set of exotic mammals; a more complete working collection of native birds, birds' nests, and eggs; an illustrative collection of the other groups of vertebrates; a rather large collection of the shells of native and exotic molluscs; and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall. The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents more especially the flora of Maine and other New England states, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticæ, Cummings and Seymour's North American Lichens, and a collection of economic seeds prepared by the U. S. Department of Agriculture.

Collections other than the herbarium include exhibits illustrating the manufacture of paper and of cocoa, the wood and bark features of the timber trees of Maine, conifers mounted in jars, plants used in pharmacy, commercial fibres, and artificial silk. The valuable collection of fossil plants presented by the late Professor Harvey occupies two cases.

THE ART COLLECTION

The establishment of the Classical department in the University of Maine, in 1899, marked the beginning of an awakened interest in the College of Arts and Sciences. Parallel with the introduction of these studies has been the interest in an art collection which serves to vitalize and intensify the work in the humanities.

The collection which has gone forward with rapid growth consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University is fortunate in possessing many of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library contains examples of the work of the chief Florentine and Umbrian masters of the 14th and 15th centuries, arranged on the walls in historical sequence. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the departments of Greek and Latin have a large collection of photographs and lantern slides. A stereopticon lantern is a part of the regular equipment in Classics and Art.

ORGANIZATIONS

The following is a list of organizations existing in the University: The Deutscher Verein, the Cercle Français, the Debating Society, the Electrical and Mechanical Society, Alpha Zeta, (honorary), the Agricultural Club, the Civil Engineering Society, the Chemical Society, the Literati, the Dramatic Club, the Phi Kappa Phi, (honorary), Tau Beta Pi, (honorary), the Young Men's Christian Association, the Young Women's Christian Association, the Round Table, the Arts Club, the Athletic Association, the Glee Club, the Instrumental Club, the Band.

Junior Electrical and Mechanical Society.—The Junior Electrical and Mechanical Society aims to unite the interests of the electrical and mechanical students and to keep its members in touch with the practical

side of engineering. The society meets each week when topics of practical interest are explained and discussed. All juniors in electrical or mechanical engineering are eligible to membership, and seniors are honorary members.

Student Section of the American Society of Mechanical Engineers.—A regular organized section of this national society holds regular meetings for the presentation and discussion of engineering papers by members and by visiting engineers.

Junior Civil Society.—This society is composed of the members of the junior class who are enrolled in the curriculum in civil engineering. The object of the society is to investigate by reading and discussion the various engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of other institutions and by other practicing engineers.

The affairs of the society are controlled by the students under the advice of the head of the department of civil engineering.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing, or to those who have shown marked ability along the lines of agricultural study and research.

The Agricultural Club.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

The Dramatic Club.—The Dramatic Club aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all undergraduates are eligible.

The Literati.—This is an organization in the College of Arts and Sciences for the promotion of the literary, dramatic, and musical interests of the University.

Deutscher Verein.—This society, organized in 1902, is composed of students and teachers. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

Cercle Français.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the spring semester of the junior year the five members of the class having the highest standing are elected members, and at the end of the fall semester of the senior year the five next highest in the collegiate department, and two from the College of Law, are added.

The Young Men's Christian Association.—The Young Men's Christion Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Library, and classes for the study of the Bible are conducted on Sunday. This association is a branch of the national Yourg Men's Christian Association.

The Young Women's Christian Association.—This is an organization for religious work composed of women students.

Round Table.—The Round Table is an organization composed of the women of the faculty, the wives of the professors and instructors, and other women interested in the University. Its purpose is to promote the social welfare of the students.

The Arts Club.—This is a club composed of the professors and instructors in the College of Arts and Sciences with their wives. It meets monthly and discusses various subjects of general interest.

Tau Beta Pi.—Tau Beta Pi is an honor fraternity for engineers and has chapters in about twenty-five of the leading universities and technical schools. Elections to the fraternity take place twice a year, and are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

UNIVERSITY PUBLICATIONS

The Annual Catalog of the University of Maine.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

The Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the trustees and president includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalog of graduates.

The University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

The Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public. Among recent issues are bulletins relating to the Classical Curriculum, the Curricula in Agriculture, the Curriculum in Pharmacy, the College of Law, the College of Arts and Sciences, the College of Technology, the Curriculum in Forestry, the Courses in Education, the Summer Term, and Student Expenses.

Practical Husbandry.—This is a quarterly magazine published under the direction of the Agricultural Club. It is devoted to practical and technical agriculture.

The Maine Law Review.—This is a magazine published under the direction of the College of Law. It is devoted to a discussion of law cases and other current legal problems.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the state by the Department of Agricultural Extension.

The Annual Report of the Experiment Station, and the Experiment Station Bulletins.—These give complete results of the work of investigation of the Station.

Official Inspections.—These are published by the Maine Experiment Station, and contain the results of the work in commercial feeding stuffs, commercial fertilizers, agricultural seeds, and foods and drugs.

The bulletins and "Official Inspections" are sent free on request to any resident of Maine.

The Maine Campus.—This is a journal published weekly during the academic year by an association of the students.

The Prism.—The Prism is an illustrated annual, published by the junior class.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammunition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of four companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the olive-drab service uniforms prescribed for infantry officers of the United States Army, except that "Maine" insignia and buttons are used; for non-commissioned officers, the olive-drab service uniforms of the United States Army, except that "Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14,15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty, and may wear it at other times.

The three seniors who attain the highest standing in the military department are reported to the military secretary of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

With the exceptions noted below, all men students physically qualified are required to take military work for three hours a week during their first and second years at the University. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years' course. After the freshmen and sophomore years the work is elective. Students in the College of Law, the School Courses in Agriculture, the Short Curriculum in Pharmacy, and graduate students, are excused from military work. Students admitted to advanced standing may elect other work equal in credit.

The grades and relative rank of officers and non-commissioned officers will be determined by the Professor in charge, subject to the approval of the President.

PHYSICAL TRAINING

Phyiscal training is required of freshmen two hours per week. Credit is given on the basis of three hours of physical training to one hour of recitation. All other students may elect this work and receive credit. Students registered on athletic teams are excused from this prescribed physical training during the time they are engaged in the regular athletic training, but no credit will be given for the athletic training unless the physical training is taken for the remainder of the year. Every student registering for an athletic team must pass the required physical examination.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the physical director, the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. There is a floor space of 6,262 square feet and an overhead running track. This is supplied with an equipment of modern apparatus for heavy and light gymnastic work.

The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220-yard straightaway and is graded and laid out for football, baseball, and track athletics. Here the men may exercise for recreation or train for active competition. There are several tennis courts on the university campus. On the Stillwater river canoeing may be enjoyed, as well as skating and ice hockey in the winter.

All male students exercising at class hours wear the regulation suit which consists of white shirt, white running pants with blue stripe, and white rubber sole shoes.

It is the aim of the department of physical training to encourage participation in all forms of wholesome out-door exercise and to arouse a general interest in athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for an athletic team, the department of physical training maintaining a reasonable supervision to insure regularity.

PUBLIC WORSHIP

Short religious services are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association and the Young Women's Christian Association, are held twice each week. Vesper services are held during the year in the University chapel Sundays at 3 P. M. At these services representatives of the various religious denominations are present and address the students. During the college year of 1910-1911 the following gentlemen officiated at Vesper Services:

Professor C. M. Clark, Bangor, Maine; Bishop Robert Codman, Portland, Maine; Dean W. W. Fenn, Cambridge, Mass.; President William D. Hyde, Brunswick, Maine; President F. W. Hamilton, Tufts College, Mass.; Dr. L. O. Hartman, Ohio; and Professor A. C. Knudson, Boston, Mass.; President R. J. Aley, Orono; Professor R. J. Sprague, Bangor; Mr. E. C. Mercer, Y. M. C. A. Secretary; President A. P. Fitch, Cambridge, Mass.

GENERAL REGULATIONS

It is assumed that all students entering the University are willing to be guided by the following:

Rule of Conduct

A student is expected to show both within and without the University respect for order, morality, and the rights of others; and such sense of personal honor as is demanded of good citizens and gentlemen.

The regulations in regard to the selection of studies, standing and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, athletics, and student organizations, are printed in a pamphlet, which may be obtained from the Secretary.

By these regulations, the quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of twenty-two hours of class-room work each week. In the application of this rule, two or three hours of laboratory work, or of other exercises not requiring preparation, count as one hour. No excuses for absence are asked for or required. Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise. Any student whose absence from any class-room subject exceeds certain

stated limits, in general ten per cent. of that subject, is dropped from that class and may be reinstated only by favorable action of the instructor and of the committee on attendance. If after reinstatement his record be unsatisfactory either to the instructor or to the committee, he is permanently dropped from that class.

Written examinations are held immediately before the beginning of the fall semester for all studies in arrears, and during the spring recess for fall semester arrearages. A student absent from the University by permission of the Faculty, at the time of these arrearage examinations, or at the time of a final examination, may have a special examination at such time as may be arranged with the instructor under whom the arrearage occurred. For such a special examination a fee of two dollars shall be paid to the University. A student who fails to make up an arrearage in a required subject before the study is again given in class is required to attend recitations in that study, or make up the work under a tutor selected by the Faculty.

Each student is given a report of his work shortly after the close of each semester. Parents or guardians may obtain these reports upon application to the Secretary.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average grade of B, after the freshman year. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average grade of B in all previous work, and an average standing of ninety per cent. in all previous work of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester. Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the Faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written

and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory or drawing-room work may be tested by examination, or thesis, or both, at the discretion of the committee. The note-books kept in such work shall be submitted to the committee and may take the place of a thesis in case they show practically the whole work of the course. The Faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees

The degree of Bachelor of Arts (B. A) is conferred upon all students in the College of Arts and Sciences. These students are required to fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science (B. S.) is conferred upon students who complete the Agricultural, Chemical, Chemical Engineering, Civil Engineering, Domestic Science, Electrical Engineering, Forestry, Mechanical Engineering, or Pharmacy courses.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the Short Pharmacy Course.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the Law Course.

A member of the senior class who at the end of the spring recess is deficient in any subject in which no regular examination is to be held during the remainder of the year, may have one examination, not later than the last Friday of the year, at such time and in such manner as the instructor having charge of that study may determine. Except under extraordinary circumstances no special examination will be allowed to a senior who fails in, or is excluded from, a final examination at the end of the spring semester.

Theses required from candidates for the degree of B. S. must be completed to the satisfaction of the major instructor and deposited in the library, accompanied by the binding fee, not later than twelve o'clock (noon), nine days preceding Commencement. They shall be printed or

typewritten, unless the subject matter prevents, on paper of good quality, 8 x 10½ inches, with not less than one inch margin on the inner edge and one-half inch margin on the outer. They shall be bound in black leather with title on first cover. Drawings accompanying a thesis may be folded and bound with the thesis, or placed in a pocket on the third page of the cover; or, if too many for this, they may be bound separately, in size to suit the drawings.

Candidates for degrees who fail to meet these requirements will not be awarded their degrees, and their names will not appear on the Commencement program. A minimum residence of one year is required for the attainment of any bachelor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each college year, not later than Oct. 1. Those entering the University after that date must obtain the consent of the committee on advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts or Master of Science must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degrees.

No work done before the conferring of the bachelor's degree shall be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study for each candidate must be approved by the committee on advanced degrees within three weeks after the opening of the first semester in which he registers for a degree.

A registration fee of $5 is charged, and an additional fee of $15 for examinations and diplomas is payable upon the completion of the work. One registration fee is required for graduate students.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the fifteen hours required in the spring semester. Theses must be submitted not later than May 20th. The same regulations regarding the size and style of binding, outlined under the Bachelor's degree, apply here.

For the conditions for the degree of Master of Laws see the statements under the College of Law.

The professional degrees of Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), may be conferred upon graduates of the Civil Engineering, Mechanical Engineering, and Electrical Engineering curricula, respectively, upon the presentation of a satisfactory thesis after at least three years of professional work subsequent to graduation. A fee of $10.00 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

An estimate of the necessary annual expenses of a student in any department, except the College of Law, is made in the following table. For the expenses of students in the College of Law, see the article on that college. The table is made up for men students who room in Oak Hall or Hannibal Hamlin Hall and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses.

Annual Expenses for Students from Maine

It should be noticed that clothing, traveling, vacation, society, and personal expenses are not included in the table. These vary according to individual tastes and habits.

Tuition	$30.00
Registration fee and incidentals	30.00
Laboratory fees	10.00—25.00
Text books, about	15.00
Board, 36 weeks at $3.50	126.00
Heat and light for half room and general care of dormitory	36.00—45.00
Total	$247.00-271.00

The tuition charge is $30.00 a semester, or $60.00 a year for students from Maine. For students from outside the state the tuition is $40.00 a year, and the registration and incidental fees are $30.00 a year, making a total of $70.00 a year.

By act of the Legislature, $30.00 per year is deducted from the above charge for students in the curricula in Agriculture, this being the amount of tuition charged at the time of the ACT. This does not apply to students in Forestry or Domestic Science.

By act of the Legislature of 1909, the charge to engineering students from outside the State of Maine, for the next four years, is to be $100 per year instead of $70. The charge for students from outside the State of Maine in all other courses except those in agriculture remains the same as heretofore, $70 per year.

The registration fee of $5.00, which is included in the tuition charge, must be paid at the beginning of each semester before the student enters any classes.

A fee of $2.00 is charged for any special examination.

The incidental fee is $10.00 a semester, or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

A student obliged to leave the University within two weeks after the beginning of the semester may have the foregoing amounts refunded with the exception of the registration fee. A student leaving within the first half of the semester receives a rebate of one-half the incidental expenses, and one-half of the tuition. No other rebate is made.

The cost of text-books will average about $15.00 a year for the course. These may be bought at the university store. The expense may be decreased by buying second-hand books.

Students in the laboratories and shops pay certain charges to cover the cost of materials and maintenance. These charges are as follows: Bacteriology, per course, $3.00; biology, per course, $2.00 to $3.00; chemistry, per course, $2.00 to $5.00; civil engineering, per course, $2.00 to $5.00; electrical engineering, per course, $2.50; mechanical engineering, per course, $2.00; mineralogy, per course, $2.00; pharmacy, per semester, about $3.50; physics, per course, $2.50 to $3.50; shop work, per course, $4.00 to $5.00.

The largest item of expense is board. At the Commons, the university boarding house, the price is $3.50 a week. Board may be obtained in clubs or private families at prices ranging from $3.50 to $4.50 a week.

The charge for rooms in Oak Hall is eighty-five cents a week for each student, when two occupy a room. This pays for heat and light, and for the lighting and care of the halls, public rooms, dormitory, and laundry of sheets, pillow cases, and three towels.

Students in Oak Hall supply their own furniture with the exception of a cot bed. Applicants for rooms in Oak Hall or Mt. Vernon House should make early application to the Secretary, as the accommodations are limited. Students are required to furnish three sheets and two pillow cases in addition to other bedding, and six towels. All students who reserve rooms in either dormitory will be required to make a deposit of $5.00 before August first.

In Hannibal Hamlin Hall the prices of rooms are as follows: Suite (3 rooms) No. 102, 104, 110, 112, 202, 204, 210, 212, 302, 304, 310, 312, four students in a suite, $1.25 per student. Suite (3 rooms) No. 101, 103, 109, 111, 201, 203, 209, 211, 301, 303, 309, 311, 401, 402, 403, 404, 409, 411, 412, four students in a suite, $1.00 per student. Room (single) No. 206, 208, 306, 308, two students in a room, $1.25 per student. Room (single) No. 205, 207, 305, 307, 405, 406, 407, 408, two students in a room, $1.00 per student.

The University does not assume responsibility for furniture left by students in their rooms. Such furniture is left at the student's risk.

Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 to $3.00 a week if occupied by two persons.

Expenses in connection with athletics are met by voluntary subscriptions. They amount to $10.00 a year.

Women students who do not live at their own homes are required to room and board at the Mt. Vernon House. All the rooms in this house are supplied with the larger articles of furniture. Six of the ten rooms are corner rooms. For rooms with board, heat, and light, and the laundry of sheets, pillow cases, and three towels per week, the charge is $85.00 a semester for two in a room. No discount is made for absence except for prolonged illness.

A four story building in the village of Orono, known as the University Inn, provides board and rooms for a number of students.

Students are required to keep a sufficient deposit with the Treasurer to cover the bills of one semester. Students living in university domitories must make a semester deposit of $85.00, in addition to the deposit required for other semester charges. This deposit must be made in full before a student is permitted to register and attend classes. *No students will be allowed to graduate who is in debt to the treasury.*

THE KITTREDGE LOAN FUND

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security, but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship, thirty dollars, was endowed by Frank E. Kidder, Ph. D., Denver Colorado, a graduate of the University, of the class of 1879, and is awarded to a member of the junior class to be selected by the President and the Faculty.

Western Alumni Association Scholarship.—Tuition for the sophomore year is awarded that student taking a regular course whose deportment is satisfactory and who makes good progress in his studies during his freshman year.

The Junior Exhibition Prize, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

The Sophomore Declamation Prize, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

The Walter Balentine Prize, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., LL. D., Geneva, N. Y., a graduate of the University, of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

The Kennebec County Prize, twenty-five dollars, the gift of Hon. William T. Haines, LL. D., Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best thesis on applied electricity.

The Franklin Danforth Prize, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the agricultural curriculum who attains the highest standing.

The Pharmacy Prize, five dollars, is awarded to that student in the pharmacy department who attains the highest standing in chemistry in the last year of his course.

The Holt Prizes, the gift of Erastus Eugene Holt, A. M., M. D., LL. D., of Portland are given to the three students of the senior class who show the greatest improvement in their rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body, devised by Dr. Holt.

The New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. In 1907-8 it was awarded to the student who excelled in debate.

The Pittsburg Alumni Association Scholarship, yielding tuition for one year, is awarded to a member of the junior class in the College of Technology, to be selected by the President and the Professors in that College.

The L. C. Bateman Prize, five dollars, is awarded to the student who shall write the best newspaper article of one column length.

The Lewiston Journal Prize, ten dollars, is awarded to a student in the College of Agriculture who shall excel in some line of work connected with dairying.

The American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the Faculty, to the member of the senior class in Pharmacy who has made the best record in his college course.

The Fraternity Scholarship Cup.—Presented to the University by the 1910 Senior Skull Society, to be awarded at Commencement to that fraternity having the highest standing in scholarship for the preceding calendar year. The cup is to be awarded for eleven years, 1910 to 1920 inclusive. The fraternity to which this cup is awarded the greatest number of times is to be the permanent owner of the cup.

The Wingard Cup.—The gift of Edgar R. Wingard to be awarded to that student who has won his "M" in athletics, and who has made the greatest improvement in his studies.

The Class of 1908 Commencement Cup.—This is awarded each year to the class having the largest percentage of its membership back for Commencement.

Father Harrington Prize, twenty dollars.—Rev. John M. Harrington, pastor of St. Mary's Church, Orono, has established an annual prize to be given to that student who writes the best essay upon modern literature. It may treat of German, English, French, Spanish, or Italian literature. The essay may be limited to any one of these literatures or to a comparative study of any number of them. This is open to any student in the University.

ADMISSION

General Requirements.—Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one semester will be accepted in place of a bond. In the College of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of B must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Graduates of a college of equivalent standing who wish to enter an agricultural or engineering course are admitted to the junior class without examination, provided their course has covered a sufficient amount of work in mathematics, physics, chemistry, and biology.

Special Recommendations.—A good preparation in algebra and geometry is most important for those who expect to enter engineering courses.

The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing for the classical courses should devote especial attention to Greek and Latin composition, Roman history, and Latin pronunciation according to the Roman method.

Special Students.—Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired

studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, rather than for those who are incompetent to pursue a regular course. Candidates under twenty-one years of age will not be received as special students, unless they have completed the regular requirements for admission.

No examinations are required for admission to the special and extension courses in agriculture.

The terms of admission to the College of Law are stated under the proper heading.

Admission by Examinations.

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person, who will consent to conduct examinations on the days appointed in June. If possible these examinations should be in charge of the principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately, accompanied by the endorsement of the examiner. The examinations must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Secretary. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their Principals regarding their fitness to take the examinations, and to undertake college work. The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 17-22, 1912. All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application. A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission by Certificate

Certificates for admission to the freshman class without examination are accepted only from graduates of schools approved by the New England College Entrance Certificate Board (except in the case of schools outside of New England). A list of approved schools will be sent upon application. They will not be accepted for non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the Principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

Certificates from schools approved by the New England College Entrance Certificate Board will be accepted at any of the institutions co-operating to maintain it. Any Superintendent or Principal desiring to have a school under his charge placed upon the approved list should apply before April 1st to the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown St., Providence, R. I.

ENTRANCE REQUIREMENTS

To gain admission to any of the curricula leading to the degree of B. A. or B. S., 28 points must be offered by the candidates, according to the following schedules (to count 2 points, a subject must be pursued for one school year, with five recitation periods, of at least 45 minutes each, a week):

For the B. A. Curricula

Required Subjects

Foreign languages	8	points
English	6	"
History	2	"
Mathematics	5	"

Optional Subjects (7 Points to be Chosen)

(Not less than four points of any one foreign language will be accepted, except under special conditions.)

Each year of Greek	counts 2	points
" " Latin	" 2	"
" " French	" 2	"
" " German	" 2	"
Advanced Algebra	" 1	point
Trigonometry	" 1	"

Chemistry (including note-book)	"	2 points
Physics (including note-book)	"	2 "
Biology (including note-book)	"	2 "
Solid Geometry	"	1 point
Roman History	"	1 "
Greek History	"	1 "
English History	"	1 "
American History and Civil Government	"	1 "

The requirement in History must include either a year of Greek and Roman History, a year of English and American History, or a year of American History and Civil Government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

For the B. S. Curricula

(Agriculture, Chemistry, Domestic Science, Engineering, Forestry, and Pharmacy.)

Required Subjects

English	counts	6 points
* Algebra	"	3 "
Plane Geometry	"	2 "
Solid Geometry (College of Technology)	"	1 point

Optional Subjects (16 or 17 Points to be Chosen)

(Of these, two years of one modern language, one year of science, and one year of history must be taken. Candidates entering a B. S. course and offering four years of Latin may complete their entrance credits without a modern language, but must take at least four credits in modern language in college.)

Each year of French	counts	2 points
" " German	"	2 "
" " Latin	"	2 "
" " Greek	"	2 "
Advanced Algebra	"	1 point
Trigonometry	"	1 "

* Candidates who have had three full years of algebra, including a review during the last year, and the use of a completed text book may receive credit of four points. Such a course is recommended.

** Mechanical Drawing (for technical courses)	" 1	"
** Manual Training (for technical courses)	" 1	"
Chemistry (including note-book)	" 2	points
Physics (including note-book)	" 2	"
Physiography (one-half year or one year)	counts 1 point or 2	"
Biology (including note-book)	counts 2	"
Botany (including note-book)	" 2	"
Zoölogy (including note-book)	" 2	"
Physiology	" 1	point
Roman History	" 1	"
Greek History	" 1	"
English History	" 1	"
American History and Civil Government	" 1	"

Candidates for admission to the B. S. curricula who are well prepared in all the required subjects, but whose high-school course has included other subjects, instead of some of the electives mentioned above, will be allowed to substitute any subjects that will furnish a real equivalent. Each case of such proposed substitution will be considered upon its merits.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on Descriptive Geography, Arithmetic, English Grammar, Physiology, United States History, and Algebra through simple equations of the first degree. Graduates of high schools will be admitted to this course upon recommendation of the Principal.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject.

Languages

ENGLISH.—The entrance examination in English presupposes courses in composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in composition particularly is of slow growth, and requires almost daily cultivation during a

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** Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing on the basis of one credit for five forty-five minute periods per week for one year in one subject taken in the high school.

long period of time. Books, to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course such work in the elements of rhetoric, for example, as is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination on the B list of books will include incidentally questions on the syntax of sentences, and on general grammatical principles.

The grammatical sense is slowly acquired. Grammar, therefore, should be studies in the early grades and kept up from year to year and not formally introduced in some one grade, as the seventh or eighth.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Prospective candidates are advised to give especial attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The candidate is not expected to have a detailed knowledge of these books; but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1910, 1911, and 1912, the books are as follows: A. Group I (two to be selected): Shakespeare's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night. Group II (one to be selected): Bacon's Essays; Bunyan's Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography. Group III (one to be selected): Chaucer's Prologue; Spenser's Faerie Queen, (selections); Pope's The Rape of the Lock; Goldsmith's The Deserted Village; Palgrave's Golden Treasury, (First Series) Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns. Group IV (two to be selected): Goldsmith's Vicar of Wakefield; Scott's Ivanhoe, Quentin Durward; Hawthorne's House of the Seven Cables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens's Tale of Two Cities; George Eliot's Silas

Marner; Blackmore's Lorna Doone. Group V (two to be selected): Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc, The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (selected); Ruskin's Sesame and Lilies. Group VI (two to be selected): Coleridge's Ancient Mariner; Scott's Lady of the Lake; Byron's Mazeppa, The Prisoner of Chillon; Palgrave's Golden Treasury, (First Series) Book V, with especial attention to Wordsworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's Courtship of Miles Standish; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, and Pheidippides.

The B list of books is for thorough *study*. The examination will be upon subject matter, form, and structure.

B. Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address, and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

French.—The admission requirements in elementary and advanced French are those recommended by the Modern Language Association of America.

I. Elementary French.—At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life, or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; order of words in the sentence, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy

variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographic sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *le Roi des montagnes;* Bruno, *le Tour de la France;* Daudet, Easier Short Tales; De la Bédollière, *La Mère Michel et son chat;* Erckmann-Chatrian's Stories; Foa, *Contes biographiques* and *le Petit Robinson de Paris;* Foncin *le Pays de France;* Labiche and Martin, *la Poudre aux yeux* and *le Voyage de M. Perrichon;* Legouvé and Labiche, *la Cigale chez les fourmis;* Malot, *Sans famille;* Mairet, *la Tâche du petit Pierre;* Mérimee, *Colomba;* Extracts from Michelet; Sarcey, *le Siège de Paris;* Verne's Stories.

II. Advanced French.—At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's Stories; Augier and Sandeau, *le Gendre de M. Poirier;* Béranger's Poems; Corneille, *le Cid* and *Horace;* Coppée's *Poems;* Daudet, *la Belle-Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's Letters; Hugo, *Hernani* and *la Chute;* Labiche's Plays; Loti, *Pêcheur d'Islande;* Mignet's Historical Writings; Molière, *l'Avare* and *le Bourgeois gentilhomme;* Racine, *Athalie, Andromaque,* and *Esther;* George Sand's Plays and Stories; Candeau, *Mademoiselle de la Seiglière;* Scribe's Plays; Thierry, *Récits;* Vigny, *la Canne de jonc;* Voltaire's Historical Writings.

At the end of the fourth year the pupil should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: Beaumarchais' *Barbier de Séville;* Corneille's dramas; the elder Dumas' Prose Writings; the younger Dumas *la Question d'argent;* Hugo *Ruy Blas,* Lyrics, and Prose Writings; La Fontaine's Fables; Lamartine *Graziella;* Marivaux's Plays; Molière's Plays; Musset's Plays and Poems; Pellissier *Mouvement littéraire au XIX siècle;* Renan *Souvenirs d'enfance et de jeunesse;* Rousseau's Writings; Sainte-Beuve's Essays; Taine *Origines de la France contemporaine;* Voltaire's Writings; Selections from Zola, Maupassant, and Balzac.

The examinations of the College Entrance Certificate Board in Elementary French will be accepted for four points, and that in advanced French for two additional points.

GERMAN.—The admission requirements in elementary and advanced German are those recommended by the Modern Languages Association of America.

I. Elementary German.—The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schwiegersohn;* Gerstäcker, *Germelshausen;* Heyse, *L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Seidel, *Märchen;* Stökl, *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;* Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should predominate. A good selection of reading matter for the second year would be Andersen, *Märchen,* or *Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Vergangenheit, Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué, *Undine;* Gerstäcker,

Irrfahrten; Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnhelm;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen, Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterseher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for four points, and that in advanced German for two additional points.

Latin.—The entrance examination in Latin will consist of four parts as follows:

1. An examination on the elements of Latin grammar and easy translations.

2. a. An examination in sight translation of Latin prose suited to test the ability of a candidate who has read from Cæsar (Gallic War and Civil War) and Nepos (Lives) an amount not less than Cæsar, Gallic War, I-IV.

b. Questions on the ordinary forms and constructions of Latin grammar and the translation of easy English sentences into Latin.

3. a. An examination on Cicero, speeches for the Manilian Law and for Archias, with questions on subject-matter, literary and historical allusions, and grammar.

b. An examination in sight translation of Latin prose adapted to candidates who have read from Cicero (speeches, letters, and De Senectute) and Sallust (Catiline and Jugurthine War) an amount not less than Cicero, speeches against Catiline I-IV, for the Manilian Law, and for Archias.

c. A test in writing simple Latin prose which shall demand a thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school.

4. a. An examination on Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody.

b. An examination in sight translation of Latin poetry adapted to candidates who have read from Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia) an amount not less than Vergil, Æneid, I-VI.

A candidate may obtain separate credit for each part. Each represents a year's work and entrance credit for two points.

In parts 2 and 3 candidates must deal satisfactorily with both the sight and set passages, or they will not be given credit for either.

GREEK.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescribed.

History

GREEK HISTORY.—History of Greece, to the capture of Corinth, 146 B. C. Myers, Morey, or Botsford.

Roman History.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

UNITED STATES HISTORY AND CIVIL GOVERNMENT.—A knowledge such as may be obtained from Fiske, Hart, Montgomery, or McLaughlin's History of the United States.

Mathematics

ALGEBRA.—The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending on quadratic equations; the binomial theorem for positive

integral exponents; the formulas for the nth term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils are required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Plane Geometry.—The usual theorems and constructions of good text books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions of good text books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

Advanced Algebra.—Permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

Sciences

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for

one year in botany alone; a course for one year in zoölogy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy; but in such cases it must be treated as an integral part of the subject under consideration.

* Chemistry.—The necessary ground is covered by the following text-books; Brownlee and others, Hessler and Smith, McPherson and Henderson, Newell.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

The requirements in botany and zoölogy are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the board. The note book should consist of properly labelled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

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* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certificated in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

ORGANIZATION OF THE UNIVERSITY

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together for a unit. The organization is as follows:

College of Agriculture
- The Agricultural Curricula
- The Domestic Science Curricula
- The Extension Courses
- The Forestry Curriculum
- The School Courses in Agriculture

College of Arts and Sciences
- The Bachelor of Arts Curricula

College of Law

College of Technology
- The Chemical Curriculum
- The Chemical Engineering Curriculum
- The Civil Engineering Curriculum
- The Electrical Engineering Curriculum
- The Mechanical Engineering Curriculum
- The Pharmacy Curriculum

Experiment Station

GENERAL STATEMENT

The College of Agriculture, the College of Arts and Sciences, and the College of Technology offer four years' courses leading to the bachelor's degree. The College of Law offers a three years' course leading to the bachelor's degree.

The college year is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for

a semester in the College of Arts and Sciences is fourteen hours a week (exclusive of physical training and military science), leading to two and four-fifths credits. In the College of Agriculture and the College of Technology the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work, and other subjects not requiring preparation, count as half time, unless otherwise specified. Such subjects are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

Except in the College of Law, the Short Pharmacy Course, and the School Course in Agriculture, candidates for graduation are required to complete a four years' curriculum of study by securing twenty-five or thirty credits, according to the college in which they are registered.

The College of Arts and Sciences has the following graduation requirements: (One year's work in college is equivalent to two years' work in preparatory school.)

1. English, one year, five hours a week, or the equivalent divided between two years.

2. French, German, and Spanish, one year each of two of these languages, five hours a week, taken in college or preparatory school.

3. Science (biology, chemistry, or physics), one year, five hours a week, taken in college or preparatory school.

4. Courses in the classical departments, one year, five hours a week, taken in college.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, two hours a week.

The following courses may be elected to fulfill the conditions under No. 4:

Greek 11-19, inclusive; Latin 1, Latin 2, Latin 25; Philosophy 6.

The College of Agriculture has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two or three years.

2. Mathematics, one year, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French, German, Greek, or Latin), the equivalent of one-half year, five hours a week. The requirement for Latin is fulfilled by completing Latin 1 and Latin 2; and for Greek by completing Greek 1 and Greek 2.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, two hours a week.

The College of Technology has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two years.

2. Mathematics, one year, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French, German, Greek, or Latin), the equivalent of one year, five hours a week. The requirement for Latin is fulfilled by completing Latin 1 and Latin 2; and for Greek by completing Greek 1 and Greek 2. A student beginning German or French must receive at least two credits in the subject to count it toward a degree.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, two hours a week.

The science requirement in each college demands a year's work in some one science, and is not fulfilled by fractions of a year's work in two or more sciences. In making up the language requirement, work done in preparation for college may be counted, but two years' preparatory study will be reckoned as one year of college work.

Twenty-five credits (one credit is given for a recitation course that meets five hours a week, or for a laboratory course that meets at least ten hours a week, for one-half year) are required for graduaton in the College of Arts and Sciences; thirty credits are required for graduation in the College of Technology, and the College of Agriculture.

The requirements for admission to the College of Law are stated in connection with the description of that college.

THE COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

LEON STEPHEN MERRILL, M. D.
Dean and Director of Extension Work
LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry
FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science
PERCY ANDERSON CAMPBELL, M. S. A.
Profesor of Animal Industry
MINTIN ASBURY CHRYSLER, Ph. D. *Professor of Biology*
JOHN MANVERS BRISCOE, M. F. *Professor of Forestry*
GEORGE EDWIN SIMMONS, M. S. *Professor of Agronomy*
EDSON FORBES HITCHINGS, C. E., M. S.
Associate Professor of Horticulture
WILLIAM LEROY SLATE, Jr., B. S.
Associate Professor of Agronomy
LAURA COMSTOCK *Assistant Professor of Domestic Science*
WILLIAM FREEMAN SCHOPPE, B. S.
Assistant Professor of Animal Industry
ALICE MIDDLETON BORING, Ph. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
WINTHA RUDOLPH PALMER, B. S. *Instructor in Horticulture*
RALPH WOODBURY REDMAN *Instructor in Animal Industry*
CORNELIA PALMER *Instructor in Domestic Science*
ARTHUR EDWARD STANFORD, B. S.
Itinerant Instructor in Farm Management

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agricultural Extension, Agronomy, Animal Industry, Biological and Agricultural Chemistry, Biology, Domestic Science, Farm Management and Agricultural Engineering, Forestry, Horticulture, Veterinary Science, and Bacteriology. The aim of the College is to train young men for service as farmers, teachers of agriculture and the allied sciences in the schools and colleges, investigators in the agricultural experiment stations, and foresters; and to prepare young women to become teachers of domestic science and domestic art and to comprehend the problems of administration in the home and in public institutions. On entering either in four years' or two years' school course in agriculture a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the College.

The courses of instruction are organized as follows:

1. The Regular Courses:
   - The four years' general curriculum in Agronomy, Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Horticulture, Biology, Forestry, and Domestic Science.
   - The four years' curriculum for teachers in general Agriculture.
   - The two years' Teachers' Course in Domestic Science.
   - The one year Teachers' Course in Agriculture.
   - The two years' School Course in Agriculture.
   - The short winter courses in general Agriculture, Animal Industry, Horticulture, and Poultry Husbandry.
   - Farmers' week.

2. The Extension Courses:
   - The correspondence courses.
   - The lecture courses.
   - The traveling schools.
   - The demonstration work.
   - The co-operative experiments.

THE COLLEGE CURRICULA

The college curricula are designed for those who wish to follow general farming, animal husbandry, dairy husbandry, poultry husbandry, horticulture, domestic science, chemistry as related to experiment sta-

tion work, veterinary science and bacteriology, biology, farm management, and forestry either as a business or as a profession.

Certain studies are fundamental to all work in agricultural lines. As many as possible of these studies are offered in the first two years, during which time the student is necessarily given no choice of subjects. At the beginning of the junior year each student must decide whether he is to specialize in Agronomy, Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Horticulture, or Biology. To specialize in any one of these lines, he must during his junior and senior years take the studies given in the schedules which follow.

Students in agriculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. Those intending to take this course should elect a preparatory course in quantitative chemical analysis.

One of the following curricula, embracing 30 credits each, is required for the students taking the four years' courses in agriculture. It is recommended that the subjects be taken in the order here given. The elective subjects are selected with the advice of the major instructor.

Curriculum for the First Two Years for All Students Taking Four Years' Courses in Agriculture

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5, †4	2	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 1, *6	2	Chemistry 4, †4	2
English 3	2	English 4	2
Military 1, *3	1	Forestry 1	2
Modern Language	3	Military 2, *3	1
Physical Training *2	1-2	Modern Language	2
		Physical Training *2	1
	19 1-2		21

SOPHOMORE YEAR

Agronomy 1	2	Agronomy 4	2
Agronomy 2, *3	1	Chemistry 7	5
Animal Industry 3	2	English 1b	1
Animal Industry 4, †2	1	Horticulture 1	4
English 1a	1	Mathematics 2, 1	5
Horticulture 2	3	Military 2, *3	1
Mathematics 4, 2	5	Poultry Husbandry 6	2
Military 1, *3	1	Poultry Husbandry 6a †2	1
Poultry Husbandry 1	1		21
Poultry Husbandry 1a †2	1		
Principles of Breeding (Bl 18)	2		
	20		

Curriculum for Students Specializing in Agronomy

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3, †4	2	Agri. Chemistry 3	2
Agronomy 6, †4	2	Agronomy 7, †2	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 10	4	Biological Chemistry 2 †6	3
English 17	2	Biology 11	4
Farm Management 2	3	English 14	2
		Veterinary Science 6	3
	18	Veterinary Science 8	1
			19

SENIOR YEAR

Animal Industry 6, †2	1	Agronomy 9, †2	1
Animal Industry 7	2	Animal Industry 5	2
Bacteriology 3, †6	3	Animal Industry 8, *3	1
Farm Management 4	2	Biology 8	4
Horticulture 3	2	Farm Management 1	3
Thesis	3	Farm Management 5	3
Elective	3	Thesis	3
	16		17

Curriculum for Students Specializing in Animal Industry

Animal and Dairy Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 6, †2	1	Agr. Chemistry 3	2
Animal Industry 7	2	Animal Industry 5	2
*Bacteriology 2	1	Animal Industry 8, *3	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 3	4	Biological Chemistry 2, †6	3
Farm Management 2	3	Biology 6	4
Farm Management 4	2	Veterinary Science 6	3
		Veterinary Science 8	1
	17 or 18		19

SENIOR YEAR

Animal Industry 9, 2	4	Animal Industry 12, †2 1	3
Veterinary Science 9 2		Animal Industry 11, 2	
or		or	
*Animal Industry 13 2	4	*Bacteriology 4	2
		Biology 8	4
*Animal Industry 14, †4		English 14	2
Animal Industry 10	3	Farm Management 5	3
Bacteriology 3, †6	3	Thesis	3
English 17	2		14 or 15
Veterinary Science 7	2		
Veterinary Science 8	1		
Thesis	3		
	18		

*Note—Students desiring to follow Animal Husbandry should elect Animal Industry 9, 11, 12, and Veterinary Science 9; those following Dairy Husbandry should elect Bacteriology 2 and 4, and Animal Industry 13 and 14.

Poultry Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 6, †2	1	Agricultural Chemistry 3	2
Animal Industry 7	2	Animal Industry 5	2
Bacteriology 2	1	Animal Industry 8, *3	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 3	4	Biological Chemistry 2, †6	3
Farm Management 4	2	Biology 6	4
Poultry Husbandry 2	1	English 14	2
Poultry Husbandry 2a, †2	1	Poultry Husbandry 4	2
	17		19

SENIOR YEAR

English 17	2	Biology 8	4
Farm Management 2	3	Farm Management 5	3
Poultry Husbandry 10	2	Horticulture 4a	2
Poultry Husbandry 10a, †2	1	Poultry Husbandry 9,	2
Poultry Husbandry 5, and Elective	2 and 3 = 5	Poultry Husbandry 9a, †2	1
		Veterinary Science 5	2
or		Thesis	3
Elective	5		17
Thesis	3		
	16		

Curriculum for Students Specializing in Horticulture

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Agricultural Chemistry 3	2
Biology 10	4	Animal Industry 5	2
English 17	2	Bacteriology 1, †6	3
Farm Management 4	2	Biological Chemistry 2, †6	3
Horticulture 3	2	Biology 11	4
Electives	2	English 14	2
		Horticulture 4a	2
	17	Horticulture 7	2
			20

SENIOR YEAR

Animal Industry 6, † 2	1	Animal Industry 8, * 3	1
Animal Industry 7	2	Biology 8	4
Farm Management 2	3	Horticulture 5	3
Horticulture 4b	2	Horticulture 6	2
Horticulture 8	3	Thesis	3
Thesis	3	Elective	2
Elective	3		
	17		15

Curriculum for Students Taking a Major Course in Biology

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biol. Chemistry 1	5	Anim. Embryology 6	4
English 2a	2	Biol. Chemistry 2, † 6	3
Modern Language	3	English 2b	1
Plant Histology 10	4	Modern Language	3
Verteb. Zoölogy 2	4	* Plant Pathology 16	
		or	3
	18	Elective	
		Plant Physiology 11	4
			18

SENIOR YEAR

Animal Histology 3	4	Animal Physiology 5	5
Advanced Zoöl. or Botany	3	Bacteriology 1, † 6	3
Bacteriology 2	1	Entomology 8	4
Geology 5	3	* Plant Pathology 16	
Thesis	3	or	3
Elective	3 1-2	Elective	
	17 1-2	Thesis	3
			18

* Given in alternate years.

Curriculum in Agriculture for Those Who Intend to Become Teachers of this Subject in the Public Schools

This course is offered in response to a call for men capable of teaching all branches of elementary agriculture in high schools or academies. In order to receive a degree, 150 hours, or 30 credits, must be completed.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5, †4	2	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 10, *6	2	Chemistry 4, †4	2
English 3	2	English 4	2
Military 1, *3	1	Forestry 1	2
Modern Language	3	Military 2, *3	1
Physical Training *2	1-2	Modern Language	2
	19 1-2	Physical Training *2	1
			21

SOPHOMORE YEAR

Animal Industry 3	2	Agronomy 4	2
Animal Industry 4, †2	1	Education 2	3
Education 1	3	English 1b	1
English 1a	1	Horticulture 1	4
Horticulture 2	3	Mathematics 1, 2	5
Mathematics 4, 2	5	Mech. Engineering 2, *4	1
Mech. Engineering 1b, *4	1 1-2	Military 2, *3	1
Military 1, *3	1	Poultry Husbandry 6	2
Poultry Husbandry 1	1	Poultry Husbandry 6a, †2	1
Poultry Husbandry 1a, †2	1		20
	20 1-2		

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 1	2	Agronomy 10, *3	1
Agronomy 2, *3	1	Chemistry 7	5
Biology 15	3	Education 8	2
Education 5	3	English 14	2
English 17	2	Horticulture 4a	2
Geology 5	3	Modern Language	2
Horticulture 3	2	Veterinary Science 6	3
Modern Language	3	Veterinary Science 8	1
	19		18

SENIOR YEAR

Animal Industry 7	2	Animal Industry 5	2
Biological Chemistry 1	5	Animal Industry 8, *3	1
Horticulture 4b	2	Agricultural Chemistry 3	2
Physics 4	5	Bacteriology 1, †6	3
Veterinary Science 7	2	Biology 8	4
Veterinary Science 8	1	Physics 5, *5	2
		Elective	1
	17		15

The Forestry Curriculum

A complete undergraduate curriculum is arranged which will serve as the basis not only of practical work in forestry, but also of a liberal education. During the first two years much attention is given to biology and civil engineering, both of which are important fundamentals upon which are built the more technical forestry courses. A knowledge of the principles of forestry in its different branches is given to the student, and considerable practical work is done in the forest. The woodlands belonging to the university together with adjacent lands covered by young forest, furnish a field for the study of many forest problems. Field trips are made and demonstration thinnings and plantations made at various places throughout the state.

The instruction in this department consists of lectures, recitations, laboratory, and field work; the latter consuming a considerable portion of the scheduled time during the junior and senior years.

Students who complete the curriculum are admitted to advanced standing in the graduate schools of forestry and are thus able to shorten the time required to obtain a master's degree. Students completing the curriculum are, however, prepared to go directly into practical work, and up to the present time there has been no difficulty in placing graduates in permanent positions.

There are good openings for students to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying the expense of their university course.

Besides the prescribed work in other departments, courses 4 to 14 inclusive are required of all students majoring in forestry, and courses 3 and 15 are recommended as electives for these students. Course 1 is open to all students, but is not required of students majoring in forestry.

At graduation the student receives the degree of Bachelor of Science in Forestry. A special bulletin, giving detailed descriptions of all the courses as well as of the equipment, is issued by the department and will be sent free to any address upon request.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3 †4	2	Chemistry 4, †4	2
Drawing 1 *6	2	Drawing 1, *6	2
English 1a	1	English 1b	1
English 3	3	English 4	2
Mathematics 4, †2	5	Mathematics 2, 1	5
Military *3	1	Military *3	1
Physical Training	1-2	Physical Training	1
	21 1-2		22

SOPHOMORE YEAR

Agronomy 1	2	Biology 17	4
Agronomy 2	1	Biology 11	4
Biology 10	4	Civil Engineering 2b, 2c...	1 1-2
Biology 17	4	Economics 2a	2
Civil Engineering 1a, 1b....	2 1-2	English 2b	1
English 2a	2	Horticulture 1	2
Military	1	Military	1
Modern Language	3	Modern Language	2
	19 1-2		17 1-2

JUNIOR YEAR

Civil Engineering 4b, c.....	2	Biology 16	3
Geology 5	3	Civil Engineering 9a	1
Forestry 10	2	Civil Engineering 9b.....	2
History 5	2	Economics 6	3
Horticulture 9	3	Forestry 11	2
Modern Language	3	Modern Language	2
Electives	3	Electives	4
	18		17

SENIOR YEAR

Biology 18	2	Forestry 13	1
Economics 1a	2	Forestry 7	2
Forestry 12	5	Forestry 9, *6	2
Forestry 6	2	History 2	3
Forestry 8, *6	2	Horticulture 8	3
Forestry 4	2	Physics 6	2
Electives	2	Thesis	5
	17		18

The Four Years' Curriculum in Domestic Science and Elementary Domestic Art

This curriculum, leading to a B. S. degree, prepares women to teach Domestic Science and Elementary Domestic Art in elementary, high, and normal schools, and in colleges. It gives instruction in cookery, diètetics, marketing, serving, household economics, laundry-work, sewing, and handwork. A foundation for the practical work is laid in pursuing

a thorough course in biology, chemistry, physiology, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this curriculum must meet the regular college requirements.

Laboratory fees are charged to cover cost of materials used. Students of the University electing these courses are also required to pay the laboratory fees. These are as follows:

Cookery courses 1-7, each $4 a semester.

Cookery courses 9-12 each $7 a semester.

Cookery course 8, $10 a semester.

Handwork courses $2 a semester.

Household economics $1 a semester.

Laundry-work $1 a semester.

Practical Housework $3.50 a semester.

Household administration, course 33, $1 a semester.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Cookery 1	2	Cookery 2	2
English 1a	1	English 1b	1
English 3	2	English 4	2
Modern Language	3	Modern Language	2
Sewing 13, †3	1 1-2	Sewing 14, †3	1 1-2
Elective	1		
	19 1-2		18 1-2

SOPHOMORE YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Art 25, †3	1 1-2	Art 26, †3	1 1-2
Cookery 3	2	Chemistry 6	5
English 2a	2	Cookery 4	2
Handwork 19, †3	1 1-2	English 2b	1
Horticulture 8	2	Handwork 20, †3	1 1-2
Mathematics 4, 2	3	H. Administration 30	2
Modern Language	3	Modern Language	2
Elective	3	Elective	4
	18		19

JUNIOR YEAR

Art 27, †3	1 1-2	Art 28	1 1-2
Bacteriology 2	1	Biology 19	2
Biol. Chemistry 1	5	Biol. Chemistry 2, †6	3
Cookery 5	2	Cookery 6	2
Philosophy 1a	3	Philosophy 1b	3
Physics 4	5	Philosophy 4	2
Sewing 15, †3	1 1-2	Physics 5, *5	2
		Sewing 16, †3	1 1-2
	19		17

SENIOR YEAR

Cookery 7	2	Cookery 8, †3	1 1-2
Economics 1a	2	Education 2	3
Education 1	3	Education 8	2
Education 5	3	Handwork 22, †6	3
Handwork 21, †6	3	H. Administration 31	1
H. Administration 29	1 1-2	Mech. Engineering 20	1
H. Administration 32	2	Practice Teaching 35	1
Methods 34	1	Thesis 36	3
Practice Teaching 35	1	Elective	3
Elective	2		
	20 1-2		18 1-2

The Two Years' Course in Domestic Science and Elementary Art

This course aims to prepare women for teachers in Domestic Science and Elementary Domestic Art. It is offered to those who find it impossible to remain at the university for a longer period. This course does not lead to a degree but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent and who have some practical knowledge of housework are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the university, courses in elementary chemistry, physics, and physiology. For information concerning fees see the four years' course.

FIRST YEAR

Subject	Hours	Subject	Hours
Art 25, †3	1 1-2	Art 26, †3	1 1-2
Bacteriology 2	1	Biology 1	5
Biology 1	5	Chemistry 2	3
Chemistry 1	2	Chemistry 4, †4	2
Chemistry 3, †4	2	Cookery 10	3
Cookery 9	3	Handwork 23, †3	1 1-2
Philosophy 1a	3	H. Administration 30	2
Sewing 17, †4	2	Philosophy 1b	3
	19 1-2		21

SECOND YEAR

Art 27, †3	1 1-2	Art 28	1 1-2
Biol. Chemistry 1	5	Biol. Chemistry 2, †6	3
Cookery 11	3	Cookery 12	3
Education 1	3	Cookery 8, †3	1 1-2
H. Administration 33	1	Biology 19	2
H. Administration 29	1 1-2	Education 2	3
Methods 34	1	Handwork 24, †3	1 1-2
Practice Teaching 35	1	H. Administration 31	1
Sewing 18, †4	2	H. Administration 32	2
		Mech. Engineering 20	1
	19	Practice Teaching 35	1
			20 1-2

The Special Courses in Agriculture and Domestic Science

The Special Courses are designed for young men and women who cannot well spend four years in preparing themselves to become farmers, but who wish to secure special training in certain agricultural subjects. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, domestic science, or general farm crops and farm management.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. If they subsequently desire to become candidates for a degree, they will be required to pass all the entrance examinations. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course.

The annual expenses for courses of one year or more are the same as those for students in the four years' courses. Tuition is free except in forestry and domestic science.

The Two Years' School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultrymen or gardeners, but who cannot devote time to high school or college training.

The same equipment is used and the same instructors give the work as in the four years' university course, but the work is of a more elementary nature. All the classes are separate and distinct from the four years' classes, and in no case will college credit be allowed for work done in the school course.

There are no entrance examinations required of those who desire to enter the school course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course, but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work either at the college, or on some farm approved by the faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester	*Spring Semester*
Animal Industry (3)	Animal Industry and Dairy Work (3)
Business Arithmetic and Farm Accounts (2)	English (3)
Carpentry (* 3)	Farm Crops (3)
English (3)	Farm Crops Laboratory (* 3)
Fruit Handling (3)	Forge Work (* 3)
Fruit Picking, Packing, and Laboratory Work (* 3)	Fruit Growing (3)
Poultry Husbandry (2)	Orchard Practice and Laboratory Work (* 3)
Poultry Husbandry Laboratory († 2)	Poultry (2)
Practical Dairying and Stock Management († 2)	Poultry Husbandry Laboratory († 2)
Soils and Fertilizers (3)	Practical Dairying and Stock Management (* 3)
Soils Laboratory (* 3)	

SECOND YEAR

Animal Industry (3)	Animal Industry (3)
English (2)	English (2)
Farm Chemistry (3)	Farm Management (3)
Farm Crops (3)	Farm Management Laboratory (* 3)
Farm Engineering and Mechanics (* 3)	Forestry (2)
Fruit Growing (3)	Garden Practice and Laboratory Work (* 3)
Orchard Practice and Laboratory Work (* 3)	Insects (2)
Poultry (2)	Poultry Management (2)
Practical Dairying and Stock Management († 2)	Practical Dairying and Stock Management († 2)
Veterinary Science (3)	Vegetable Gardening (3)
	Veterinary Science (3)

One Year's Teachers Course

Nearly every state in this country requires that the elements of agriculture shall be taught in the public schools. Maine offers extra state aid to schools that have such a course.

The graduates of the College of Agriculture are not sufficient in number to fill these places, and in order to relieve the situation "the one year course" is offered.

This course comprises a solid year of work in agriculture and closely related sciences and is designed for high school teachers, normal school teachers, and others who desire to fit themselves to teach agriculture in the secondary schools of the state but who cannot take the regular agricultural course leading to the B. S. degree. It is open to college graduates, high school teachers with at least two years' experience, and normal school graduates who have had three years' experience in teaching. A certificate is given to those completing it.

The course of study is as follows:

FALL SEMESTER

Agricultural Botany	2	Fruit Growing and Pomology	3
Agricultural Chemistry	3	Horticultural Laboratory *3	1
Agricultural Chemistry Laboratory *3	1	Manual Training *3	1
Agricultural Economics	2	Plant Propagation	3
Anatomy and Physiology of Domestic Animals	2	Poultry	2
Animal Breeding	3	Poultry Laboratory *3	1
Fertilizers	3	Soil Laboratory *3	1
		Stock Judging *3	1
		Soils	3

SPRING SEMESTER

Agricultural Engineering and Farm Management	3	Forestry	2
Agricultural Engineering *3	1	Landscape Gardening	3
Animal Feeding	3	Landscape Gardening Laboratory *3	1
Bacteriology Laboratory *3	1	Live Stock Management *3	1
Buttermaking *3	1	Manual Training *3	1
Dairying	3	Poultry	3
Economic Entomology	2	Poultry Laboratory *3	1
Education	2	School Gardening *3	1
Field Crops	3	Vegetable Gardening	3
Field Crops Laboratory *3.	1	Vegetable Gardening Laboratory *3	1
		Veterinary Science	3

The Short Courses in General Farming, Dairying, Horticulture, and Poultry Management

The short course in general farming deals especially with farm crops. Special attention is given to the potato, corn, oat, and hay crops,—the preparation of the seed bed, selection of seed, seeding, fertilization, culture, and harvesting. Such general subjects as drainage, maintenance of soil fertility, rotation of crops, control of weeds, etc., are considered. Potato, corn, and small grain judging is made a prominent feature.

The short course in dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen, and others who desire to learn milk testing, butter making, the principles of animal nutrition and practices of feeding, breeding, judging stock, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and co-operation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort is made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring and judging, and killing and marketing. Supplementing the work of the regular instructors in the university some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of instruction the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent on request by applying to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one session is given up to problems of rural betterment. A section is arranged where domestic science for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

The Department of Agricultural Extension

This department of the College of Agriculture offers correspondence courses, lecture courses, demonstration work, coöperative experiments, and movable schools in agriculture.

This work is intended to help persons directly on the farm and in the home; to aid those who desire definite instruction in practical agriculture, animal and dairy husbandry, poultry husbandry, domestic science, forestry, and horticulture, but who cannot take a long or regular course at the university. It supplements the teaching and experimenting of the College of Agriculture and the Experiment Station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the College or procured from the U. S. Department of Agriculture, or from the various Experiment Stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1—Farm Crops and Crop Production
Course 2—Farm Management
Course 3—Feeding and Breeding of Farm Animals and Dairying
Course 4—Poultry Keeping
Course 5—Fruit Growing

Course 6—Forestry
Course 7—Home Economics
Course 8—Elementary Agriculture
Course 9—Domestic Science
Course 10—Vegetable Gardening
Course 11—The Business of Dairying

Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Demonstration Work

For this work members of the agricultural faculty will make demonstrations, showing, as well as telling, how to solve many practical farm problems. These demonstrations are made on the farms and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing (use of Babcock tester); stock judging; corn and small grain judging and breeding; potato judging, breeding, and spraying; orchard spraying, pruning and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Co-operative Experiments

Experiments will be undertaken in coöperation with farmers along such lines as the following: the determination of fertilizing problems; the eradication of noxious weeds; the determination of the best means for increasing the hay crop. To encourage systematic seed improvement the college will each year distribute a large amount of improved seed of various kinds among the farmers of the state who will undertake to carry on careful experiments and to make reports of the results obtained at the close of each season.

Experiments with corn, oats, alfalfa, fertilizers, and pastures have been carried on in nearly every county in the state.

During Farmers' Week exhibits are made showing the results of this experimental work. School gardening is encouraged by the distribution of seeds.

Movable Schools in Agriculture

To extend the advantages of agricultural instruction to persons actively engaged in agriculture, the Extension Department will conduct a limited number of Three or Six Day Schools in various parts of the state. Members of the agricultural faculty will teach in these schools.

Correspondence

Besides the Demonstration, Correspondence, and Lecture courses, the College of Agriculture welcomes all kinds of correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

A free monthly publication, "Timely Helps for Farmers," treating on subjects of interest to farmers, is published by the Extension Department and may be secured upon application.

Circulars giving full information upon these subjects will be sent upon request.

DEPARTMENTS OF INSTRUCTION

Notes—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

AGRONOMY

Professor Simmons; Associate Professor Slate

1. Soils.—Lectures and recitations dealing with the following subjects: Fundamental principles underlying the science of agriculture; topographic divisions of America; origin of soil; types of soil; distribution of typical soils; structure of various types of soil; soil moisture; soil heat; soil aeration; principles of soil drainage. Careful consideration will be given to the function of humus in the soil, especially its relation to the mechanical condition of the soil and to its waterholding capacity. Attention will be given also to the study of methods of reclaiming worn-out soils. *Two hours a week.* Fall semester.

2. Soil Physics.—Laboratory practice in the establishment of principles taken up in the preceding course. Special attention will be given to the subject of cultivation of the soil. Other subjects which will be investigated experimentally are: Determination of specific gravity of soil; soil crumb; pore space of soil; capillary power of various types of soil; color of soil and relation to soil heat; evaporation of water in relation to soil heat. A mechanical analysis of various types of soil will be made. * *Three hours a week.* Fall semester.

3. Laboratory Course in Crop Judging.—This course will be comprised of the following: Study of the score-cards of the cereals, potatoes, roots, hay, and forage crops; practice in the scoring of samples submitted for judgment; practice in comparative judging of large samples of these crops without the use of a score-card. This course is designed to fit the student to become an expert judge in crops. It will give further practice in application of the principles taken up in Course 5. † *Four hours a week.* Fall semester.

4. Soil Fertility.—Lectures dealing with the question of elements of plant food in the soil, and with the problem of building up the fertility of partially depleted soils. Special attention will be given to crop rotation as a means of maintaining and increasing the fertility of soil. Other subjects of study are: Composition, care and use of barn yard manures, nature, and special value of various commercial fertilizers; scientific compounding, and home mixing of fertilizers; adaptation of fertilizers to various crops; principles of drainage as it affects fertility of the soil; organic compounds of the soil; oxidation of soil components. *Two hours a week.* Spring semester.

5. Crop Identification and Growing.—Lectures and laboratory exercises dealing with potatoes, grains, corn, roots, and forage crops grown upon the farm, their adaptation to various soils and climates. The following subjects will be considered as they apply to each crop: Preparation of the seed bed; fertilization of soil; methods of planting; seed selection; treatment of seed to prevent disease; crop culture and harvesting of crops. Special attention will be given to the study of clovers and grasses dealing with their habits of growth, individual characteristics, methods of seeding, adaptabilities, and haymaking. In connection with this course the student will be required to mount a collection of plants of the various cereals and forage crops and will be expected to be able to identify the seeds of the various crops, the plants and the prominent varieties of each crop. The student is required to mount and identify also, thirty of the worst weeds found in Maine, along with their seeds. † *Four hours a week.* Fall semester.

6. Farm Crop Breeding.—Lectures and laboratory practice in the application of the principles of breeding as applied to the improvement of crops grown upon the farm. Methods of breeding of potatoes, oats, wheat, barley, and corn will be carefully outlined and illustrated. Special attention will be given to the study of variation and correlation

of characters in the crops outlined above. Hybridization of cereals and their selection according to Mendelian principles will receive special attention. Mendel's Law as it is exemplified in corn and grain breeding will be studied. Agronomy 5 is a prerequisite. †*Four hours a week.* Fall semester.

7. Advanced Plant Breeding.—A continuation of Course 6 with original research in the application of investigation of principles taken up in Course 6. † *Two hours a week.* Spring semester.

9. Crop Marketing.—Fiber Crops. Lectures and laboratories dealing with commercial grading of grain and other farm produce, marketing crops, interpretation of crop and market reports, the great crops in their transit from producer to consumer. The production of flax, hemp and jute; identifications of weeds by plants and seeds; and the best means for their eradication. Agronomy 5 is a prerequisite. † *Two hours a week.* Spring semester.

10. School Gardening.—This course is especially designed for those taking the four years' teachers' course in agriculture. It will deal with the use of the school garden as a supplement to the teaching of agriculture in secondary schools; an outline of the material that should be found therein and the use of this material for laboratory purposes; the laying out of the school garden, and its general management. * *Three hours a week.* Spring semester.

11. Thesis.—Those specializing in Agronomy will be required to prepare a thesis on some line of this work, the subject of the thesis to be chosen by the student under the direction of the head of the department. The subject for this study should be chosen and definite assignment made before the close of the junior year. Six hours minimum credit. *Three hours* fall semester and *three hours* spring semester of the senior year.

ANIMAL INDUSTRY

Professor Campbell; Assistant Professor Schoppe; Mr. Redman

Animal and Dairy Husbandry

1. Animal Breeding.—A study of the market and breed types of dairy cattle, beef cattle, and sheep, their history, development, breed

characteristics and economic values. The work is given by lectures and text-books. *Two hours a week.* Spring semester.

2. Live Stock Judging.—Practice in the use of score cards and judging, handling and management of dairy cattle, beef cattle, and sheep. This course is taken in conjunction with Animal Industry 1. † *Two hours a week.* Spring semester.

3. Animal Breeding.—A study of the market and breed types of swine and horses, their history, development, breed characteristics, and economic values. Lectures and recitations on the principles of breeding. *Two hours a week.* Fall semester.

4. Live Stock Judging.—Practice in the use of score cards, and judging, handling, and management of swine and horses. This course is taken in conjunction with Animal Industry 3. † *Two hours a week.* Fall semester.

5. Animal Feeding.—Food requirements of different kinds of animals; composition of foods and the nutrients furnished by them; feeding formulas; calculating rations; valuation of foods; pasturing, soiling, and methods of feeding. *Two hours a week.* Spring semester.

6. Dairying.—A study of the Babcock test; use of lactometer, determination of acidity and adulterations. Given by lectures, text-books, and practice in dairy laboratory. † *Two hours a week.* Fall semester.

7. Dairying.—Lectures and recitations upon the composition and formation of milk; its production and aeration, pasteurization, separation, manufacture into butter, and marketing. *Two hours a week.* Fall semester.

8. Laboratory Dairying.—Practice in handling and testing milk and cream, for butter fat, acidity, and solids; ripening cream; making butter and operating dairy machinery. This must be in conjunction with or preceded by Animal Industry 6 and 7. * *Three hours a week.* Spring semester.

9. Advanced Animal Feeding.—This course is devoted to the methods and practices of successful feeders in the production of milk, meat,

and the rearing of horses. Elective for those who have completed Animal Industry 5. *Two hours a week.* Fall semester.

10. Advanced Dairying.—This course is provided for those who desire to follow some line of dairying. It will deal with such problems as handling of milk for city trade, milk inspection, certified milk plants, manufacture and sale of ice-cream, and those problems pertaining to the creamery. Animal Industry 6, 7, and 8 are prerequisites for this course. *Three hours a week.* Fall semester.

11. Advanced Animal Breeding.—Lectures upon the formation of flocks, herds, etc.; a study of pedigrees, records, and the practices of successful breeders. Elective for those who have completed Animal Industry 1 to 4, inclusive. *Two hours a week.* Spring semester.

12. Advanced Stock Judging and Management.—This course is intended for those who desire more judging than is given in Animal Industry 2 and Animal Industry 4; also actual experience in preparation of stock for the show ring and market. † *Two hours a week.* Spring semester.

13. Cheese Making.—Lectures and recitations upon the manufacturing and curing of Cheddar and other brands of cheese. Elective for those who have completed Animal Industry 6, 7, and 8. *Two hours a week.* Fall semester.

14. Cheese Making.—Practice in the laboratory. Taken in conjunction with Animal Industry 13. † *Four hours a week.* Fall semester.

15. Thesis.—Students specializing in animal industry are required to prepare a thesis on some subject pertaining to the department. *Three hours* fall semester and *three hours* spring semester.

Poultry Husbandry

Courses 1, 1a, 6, and 6a, are required of all agricultural students. Courses 2, 2a, 4, 8, 9, 9a, and 10a are required of all students specializing in poultry husbandry. Course 5 is required only of students who intend to become teachers of, or Experiment Station workers in, poultry husbandry.

1. Poultry Breeds and Management.—A general consideration of the present status of poultry keeping in America. A study of the types and breeds of market poultry, including ducks, geese, and turkeys. *One hour a week.* Fall semester.

1a. Laboratory Practice.—The judging of the breeds of poultry, mainly from the utility standpoint; the selection of breeding stock. To be taken with Course 1. † *Two hours a week.* Fall semester.

2. Commercial Poultry Keeping.—Considered as a business, as an investment, as an employment. A consideration of the large successful poultry farms and how they are operated. *One hour a week.* Fall semester.

2a. Laboratory Practice.—The planning and laying out of poultry plants, houses, and fixtures suitable for specialization on a large scale. To be taken with Course 2. † *Two hours a week.* Fall semester.

4. Markets and Marketing.—A consideration of the requirements of the best markets for poultry produce in America, possible improvements, the commission business, cold storage, coöperation. *Two hours a week.* Spring semester.

5. Poultry Literature.—An advanced course in the study of bulletins and reports of the Experiment Stations in this and other countries, with especial attention to the work of the Maine Experiment Station, poultry papers, and text books. *Two hours a week.* Fall semester.

6. Poultry Management.—A continuation of Course 1. A study of feeds and feeding, egg production, incubation, brooding, housing, rearing and feeding of young stock, and poultry fattening. *Two hours a week.* Spring semester.

6a. Laboratory Practice.—The drawing of plans of houses and appliances suitable for work on the farm; practice in the mixing of feeds; the examination of incubators and brooders; the killing and dressing of poultry; and the handling of eggs for market. To be taken with Course 6. † *Two hours a week.* Spring semester.

8. Thesis.—Original work on some subject chosen by the student under the direction of the head of the department.

9. Incubation.—Natural and artificial; history of artificial, Chinese, and Egyptian methods; modern methods; the principles; the application. *Two hours a week.* Spring semester.

9a. Laboratory Practice.—The selection of eggs to set; the operation of incubators; the setting of hens and other work intimately connected with the operation of incubators and brooders. † *Two hours a week.* Spring semester.

10. Breeds and Breeding.—A study of the types and breeds of market and fancy poultry; their history, development and breed characteristics; mating; the application of the principles of breeding to both fancy and utility poultry. *Two hours a week.* Fall semester.

10a. Laboratory Practice.—The judging and scoring of the various breeds and varieties of poultry; the selection, washing, and fitting of birds for exhibition. To be taken with Course 10. † *Two hours a week.* Fall semester.

BACTERIOLOGY AND VETERINARY SCIENCE

Professor Russell

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. This course may be taken alone or in connection with Bacteriology 2. † *Six hours a week.* Spring semester.

2. Bacteriology.—A lecture course open to all students. It should be elected by students taking Bacteriology 1 as well as by students who cannot take a laboratory course. Subjects considered will include history of bacteriology; classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products; the relation of bacteria to health and disease; immunity. *One hour a week.* Fall semester.

3. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogeric bacteria. Bacteriology 1 is a prerequisite. † *Six hours a week.* Fall semester.

4. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

5. Veterinary Science.—This course deals with the anatomy, physiology, and diseases of poultry. *Two hours a week.* Spring semester.

6. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals and their treatment to preserve and restore health. *Three hours a week.* Spring semester.

7. Veterinary Science.—A continuation of Veterinary Science 6. *Two hours a week.* Fall semester.

8. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.* Fall and spring semester.

9. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.* Fall semester.

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Merrill

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source, nature, and assimilation of plant food; the composition of the animal body and of food materials; the adaptation of food to the animal requirements; the chemical changes involved in the digestion and assimilation of foods; respiration; absorption and liberation of energy; general metabolism; and the chemical processes and methods of investigation by which these subjects are studied. *Five hours a week.* Fall semester.

2. Laboratory Biological Chemistry.—A study of the carbohydrates, fats, and protein bodies; the digestive enzymes; the blood, muscle, bones, and other tissues of the body; milk, bile, and other secretions. A continuation of the preceding course. † *Six hours a week.* Spring semester.

3. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; the fixation of atmospheric nitrogen; and the chemistry of milk and other dairy products. *Two hours a week.* Spring semester.

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter, and other dairy products. The course is designed for students desiring to take up experiment station and inspection work. Open to students who have completed the courses, Chemistry 1, 2, 3, 4, 7, 8, 14, 15, and 16. † *Ten hours a week.* Spring semester.

5. Geology.—A study of the earth's history and development, with especial attention to dynamical, structural, and physiographical geology. *Three hours a week.* Fall semester.

6. Economic Geology.—A course in applied geology, including a general survey of our mineral resources, with special reference to the mineral fuels; the distribution and manner of occurrence of the more useful metals; the economically important non-metallic minerals; and a study of the rocks and their uses as building stone, as road material, and as a source of lime and cement. *Two hours a week.* Fall semester.

BIOLOGY

The courses in this department are described under the College of Arts and Sciences.

DOMESTIC SCIENCE

Assistant Professor Comstock; Miss Palmer

Cookery

1. Cookery.—Lectures, recitations, and laboratory practice. This course provides instruction in the general principles controlling the preparation of food with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Serving, taken in conjunction with the course in cookery, deals with the arrangement of a dining room, table equipment, and rules for table service. Practical serving of at least one meal. Lecture, *one hour a week;* laboratory, † *Two hours a week.* Fall semester.

2. Cookery.—Continuation of Course 1. Marketing is included in the work of this semester. Lectures and recitations on purchasing and care of general supplies; vegetables, fruits, meats, poultry, and fish; dairy products; adulteration and preservation of food. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

3. Cookery.—Canning and preserving occupy six weeks of this semester, the remainder of the time being given to general cookery. Accounts are taken in this semester. The work includes household and institutional accounts; inventories; requisitions; making of bills; payment by check; vouchers; contracts. Open to students who have taken courses 1 and 2. Lecture, *one hour a week;* laboratory, † *two hours.* Fall semester.

4. Cookery.—Continuation of course 3. Open to students who have completed courses 1, 2, and 3. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

5. Diet for Children.—A thorough review of the principles of cookery. Practical tests given in which speed and dexterity are noted. A modification of the adult diet as adapted to children is considered. Open to students who have taken courses 1, 2, 3, and 4. Recitation, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

6. Diet for Invalids.—Special consideration of food for the sick and convalescent. Same requirements as for course 5. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

7. Cookery.—A return to general cookery is made through work in large quantities, and the preparing and serving of meals. Demonstration work is another feature. Open to students who have taken courses 1, 2, 3, and 4. Lecture, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

8. Fancy Cookery and Field Work.—A course which gives instruction in serving a formal dinner; fancy cookery including garnishing. Field work consists in visiting a model dairy, wholesale grocery, meat market, flour mill, canning factory, etc. Required work in the last semester of the two courses offered. † *Three hours a week.* Spring semester.

9. Cookery.—Designed for those taking the two years' teachers' course. Includes instruction in general principles of cookery and study of typical foods. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

10. Cookery.—Continuation of course 9. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

11. Advanced Cookery.—Canning, preserving, and elaboration of the principles of cookery as taught in courses 9 and 10. Special diet for children given the last part of the semester. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

12. Diet for Invalids.—Continuation of course 11 and diet for invalids. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

Sewing

13. Hand Sewing.—This course includes the fundamental principles of hand sewing taught in connection with the making of towels, napkins, skirts, etc. † *Three hours a week.* Fall semester.

14. Hand Sewing.—Making of undergarments by hand after a pattern. † *Three hours a week.* Spring semester.

15. Machine Sewing.—Drafting of patterns for undergarments and an unlined dress. † *Three hours a week.* Fall semester.

16. Machine Sewing.—Continuation of course 15. † *Three hours a week.* Spring semester.

17. Hand Sewing.—This course presents the essentials of courses 13 and 14 in a condensed form. † *Four hours a week.* Fall semester.

18. Machine Sewing.—This course presents the essentials of courses 15 and 16 in a condensed form. † *Four hours a week.* Fall semester.

Handwork

19. Handwork.—This consists of knotting, knitting, crocheting, weaving, caning, and basketry. † *Three hours a week.* Fall semester.

20. Handwork.—Continuation of course 19. † *Three hours a week.* Spring semester.

21. Advanced Handwork.—Basketry and weaving. † *Six hours a week.* Fall semester.

22. Advanced Handwork.—Continuation of course 21. † *Six hours a week.* Spring semester.

23. Handwork.—Offered to students taking the two years' course. It includes all the principles involved in course 19. † *Three hours a week.* Spring semester.

24. Handwork.—Continuation of course 23. † *Three hours a week.* Spring semester.

Art

25. Drawing.—This course consists of a study of line, light and dark, and color. † *Three hours a week.* Fall semester.

26. Design.—Emphasis this semester is placed upon design. The designs made are used in basketry and weaving. † *Three hours a week.* Spring semester.

27. Construction.—This course consists of lectures and the making of a lower floor plan of a modern house. The details of window, door, wall, and fireplace construction, chimneys, pantry, etc., are carefully considered. Special problem of planning Domestic Science kitchens. † *Three hours a week.* Fall semester.

28. Color Schemes.—Lectures on house furnishings and a practical problem of making color-scheme, using actual materials for the house planned in course 27. Lecture *one hour a week,* and laboratory † *one hour a week.* Spring semester.

Household Administration

29. Household Economics.—Lectures, recitations, and practice. Principles of housework examined. Methods studied and practical applications made. Lecture *one hour a week;* laboratory † *one hour a week.* Fall semester.

30.—Laundry Work.—Principles and processes included in laundry work are studied. Equipment for the home and school, care of equipment; processes of laundering; sorting and soaking clothes; removal of stains; methods of handling cotton, linen, silk, woollen; special points considered with colored materials; rinsing, bluing, making soap, etc. Lecture *one hour a week;* laboratory † *two hours a week.* Spring semester.

31. Home Nursing.—Considers the sick room and its appointments; care of patient; bandages, kind and technique; contagious diseases; burns, frost-bites, etc. *One hour a week.* Spring semester.

32. Practical Housework.—This course affords opportunity for a student to show practically her power in managing a household and serving luncheons to twelve or more people in a specified time and with limited means. Time to be arranged. Counts as *two hours a week* one semester. Senior year.

33. Marketing, Serving, and Accounts.—Some general plan followed as outlined in cookery 1, 2, and 3. Required of two-year students. *One hour a week.* Fall semester.

34. Methods.—This course investigates the methods applicable to teaching domestic science and domestic art in the schools. Effort is made to discover the means whereby a wholesale atmosphere is secured in the school room; and how the self-activity and self-direction of pupils may be fostered. Courses of study are outlined. *One hour a week.* Fall semester.

35. Practice Teaching.—Practice teaching is required of students in the senior year. This teaching is done under supervision. *Two hours credit.*

36. Thesis.—A thesis on a subject relating to Domestic Science and showing independent work is required of all students taking the four years' course. Equivalent to *three hours a week.* Spring semester.

FARM MANAGEMENT AND AGRICULTURAL ENGINEERING

Professor Simmons; Associate Professor Slate

1. Farm Management.—A study of the various types of farming, with comparison of investment and returns for each. A study will be made of the conditions under which extensive, intensive, and mixed systems of farming prosper or fail; laying out of fields and rotation of crops; investigation of cost of different farming operations; management of men and teams; markets and marketing. Farm surveys with a detailed study of the conditions on different farms will be made. Farm plans will be outlined to suit various conditions. *Two hours lecture and * three hours laboratory a week.* Spring semester.

2. Agricultural Engineering and Rural Architecture.—(a) *Agricultural Engineering.* Farm surveying and levelling. The plotting of farms and the measurement of land; a study of drainage; estimating the investment and returns from a system of drainage; the making of roads; road material.

(b) *Rural Architecture.* The planning, designing, location, and construction of farm buildings, water systems, sewerage, concrete construction. *Two hours lecture and * three hours laboratory a week.* Fall semester.

3. History and Economics of Agriculture.—(a) *History of Agriculture.* A history of agriculture from early times to the present day; the beginning of British agriculture, and the development of modern agriculture; the agriculture of the United States, its influence on social conditions; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the evolution of farm machinery; and progress in agricultural education. Lectures supplemented by illustrative material and lantern slides.

(b) *Economics.* The factors of agricultural production, and their economic properties; organization of the farm; rent of farm land; the law of diminishing returns from the land; system of distribution; co-operative organizations; a study of life in the rural communities; schools and other rural organizations. *Two hours lecture and † two hours laboratory a week.* Fall semester.

4. Farm Accounting.—(a) *Farm Mathematics.* Instruction in this subject consists in the application of its principles to all kinds of farm problems where measurements of material, extension, capacity, etc., are required.

(b) *Farm Records and Accounts.* A system of records of the various operations of the farm, such as records of field labor, milk production in the dairy, crop yields, etc.; a system of accounts sufficient to provide for the receipts and expenditures on the farm. *Two hours lecture a week.* Fall semester.

5. Farm Mechanics and Farm Machinery.—(a) *Farm Mechanics.* A study of the simpler laws of mechanics as applied to farm implements and farm machinery.

(b) *Farm Machinery.* A study of machinery used on the farm, farm power, etc. Demonstrations and tests are made with various machines and implements. *Two hours lecture and * three hours laboratory a week.* Spring semester.

FORESTRY

Professor Briscoe

The courses in Forest Botany and Forest Zoölogy are listed under Biology.

General Forestry.—The importance and scope of the subject; forest as a soil-former and soil-improver; relation of forest to health of a community; relation to the state; esthetic value; influence on floods; importance of forest in irrigation; geographical distribution of forests. The course is recommended to the student in economics. Open to all students. *Two hours a week.* Spring semester.

3. Forest Mapping and Computing.—Making type and topographical maps using data of valuation surveys; practical work in computing aneroid readings for altitude; timber estimates from valuation surveys. Elective for seniors. *Time to be arranged.* Spring semester.

4. Forest History.—The rise and development of forestry in European countries, the United States, and other countries. Text-book, History of Forestry, by B. E. Fernow. *Two hours a week.* First-half of fall semester.

6. Silviculture.—A study of the facts which concern forest growth in the relation of the tree to external influences; characteristics of the forest, and of the forest regions of the United States; systems of reproducing forests naturally, thinnings and improvement cuttings. To be taken in connection with course 8. Open to those who have taken Biology 10 and 11. *Two hours a week.* Fall semester.

7. Silviculture.—A continuation of course 6. To be taken in connection with course 9. *Two hours a week.* Spring semester.

8. Silviculture Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 to 2000 acres of forest land in the vicinity of the University. A report accompanies the map describing the condition of the tract and type of forest growth. Open to students in Forestry who have had Drawing 1 and 2. * *Six hours a week.* Fall semester.

9. Silviculture Field Work.—A continuation of course 8. It includes practice in thinning and work in planting; practical test of germinating quality of tree seeds and a study of seedlings. The student is required to make a planting plan for about 100 acres of land and prepare a map of the tract. This course should be preceded by courses 6 and 7. * *Six hours a week.* Spring semester.

10. Forest Measurements.—Practical instruction in the woods and in the office. Some recitations.

(1) *Woods Work.*—The use of various hypsometers in ascertaining the height of standing trees; determining the contents of felled and standing trees and the volume of stands; study and use of American log scales; consideration of the methods of measurement used in the United States; study of the rate of growth of trees in diameter, height, and volume.

(2) *Office Work.*—Computing the data obtained in the woods; calculating the contents of logs in cubic feet, and the contents of trees and stands in cubic feet, cords and board feet; use of graphic methods in determining the average rate of growth in diameter, height, and volume; construction of tables of rate growth, volume and yield. * *Six hours a week.* Fall semester.

11. Forest Measurements.—A continuation of course 10. * *Six hours a week.* First half of spring semester.

12. Lumbering.—The industry considered from an economic standpoint; an account of the methods of lumbering in the different parts of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and prepare a written report on the operations of lumbering in that locality. Fall semester. Two-fifths credit is allowed for the time spent in the lumber camp and in preparing the report. Open to students taking forestry as a major subject. *Two hours a week.* First half of fall semester.

13. Forest Management.—Financial and economic considerations; the normal forest; principles and preparation of working plans. Open to those who have taken courses 6, 7, 8, 9, 10, and 11. *Two hours a week.* First half of the spring semester.

14. Thesis Work.—The preparation of a thesis. *Throughout the senior year as arranged.*

15. Wood Technology.—The common commercial woods classified as to their physical properties and their economic uses. Methods of identification other than microscopic. Mechanical, chemical, and other properties of wood. Elective for seniors majoring in forestry and for other students who have taken Biology 1 and 10.

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry.

HORTICULTURE

Associate Professor Hitchings; Mr. Palmer

1. Principles of Fruit Growing.—A study of orchard sites and soils, methods of setting, cultivating, fertilizing, pruning, and spraying. *Two hours a week* in class room and † *four hours a week* in the laboratory. Spring semester.

2. Fruit Handling.—A study of methods of picking, grading, packing, storing, and marketing fruit. The laboratory work of this course will acquaint the student with the more important varieties of fruit in this state. *Two hours a week* in class room and † *two hours a week* in the laboratory. Fall semester.

3. Systematic Pomology.—A systematic study of the types and varieties of the leading groups of fruits, their evolution and adaptation to environment. Also distribution of varieties in the state. Open to students who have taken courses 1 and 2. *One hour a week* in class room and † *two hours a week* in the laboratory. Fall semester.

4a. Vegetable Gardening.—A study of the principles of vegetable gardening accompanied by exercises in the care of cold frames, hot beds, and garden plantings. *One hour a week* in class room and † *two hours a week* in the laboratory. Spring semester.

4b. Vegetable Gardening.—A continuation of course 4a with a study of garden varieties and types for home and commercial use; also grading, marketing, and storing of vegetables. *One hour a week* in class room and † *two hours a week* in the laboratory. Fall semester.

5. Small Fruit Culture.—A study of the bush and vine fruits, including strawberries, taking up adapted varieties with culture, picking, grading, packing, and marketing,—home and commercial. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Spring semester.

6. Greenhouse Management and Construction.—A study of the different greenhouse crops, supplemented by practice in the regular greenhouse operations and including a study of the principles of greenhouse construction in heating. *One hour a week* in class room and † *two hours a week* in the greenhouse. Spring semester.

7. Plant Breeding.—A study of plant breeding as applied to variation, selection, and hybridization as adapted to garden and fruit crops. *Two hours a week.* Spring semester.

8. Landscape Gardening.—A study of the principles of landscape art and of the materials used in making landscape pictures. Special attention is given to the improvement of the home grounds. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Fall semester.

9. General Horticulture.—An introductory course designed to cover the entire field of horticulture in a general way. Intended for students who desire a general knowledge of the subject. Elective and open to all students in the University. *Three hours a week.* Fall semester.

10. Thesis.—Students specializing in Horticulture are required to prepare a thesis on some subject pertaining to Horticulture. *Three hours a week.* Fall and spring semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 36.

PHYSICAL TRAINING

The courses in this department are described on page 37.

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

JAMES STACY STEVENS, M. S., LL. D.
Dean and Professor of Physics

MERRITT CALDWELL FERNALD, PH. D., LL. D.
Emeritus Professor of Philosophy

LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological Chemistry

JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy

JOHN HOMER HUDDILSTON, PH. D. *Professor of Greek*

JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages

GEORGE DAVIS CHASE, PH. D. *Professor of Latin*

CAROLINE COLVIN, PH. D. *Professor of History*

*ROBERT JAMES SPRAGUE, PH. D.
Professor of Economics and Sociology

WALLACE CRAIG, PH. D. *Professor of Philosophy*

ROLAND PALMER GRAY, M. A. *Professor of English*

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*

GUY ANDREW THOMPSON, M. A. *Professor of English Literature*

*WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking

MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*

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*Absent on leave.

ARTHUR JULIUS JONES, Ph. D. *Professor of Education*
GEORGE WARE STEPHENS, Ph. D.
Professor of Economics and Sociology
CHARLES WILSON EASLEY, Ph. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, Ph. D.
Associate Professor of Romance Languages
* HARLEY RICHARD WILLARD, M. A.
Assistant Professor of Mathematics
LEON ELMER WOODMAN, Ph. D. *Assistant Professor of Physics*
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
ALICE MIDDLETON BORING, Ph. D.
Assistant Professor of Zoölogy
WALTER EVERETT PRINCE, M. A. *Instructor in English*
LOWELL JACOB REED, B. S. *Instructor in Mathematics*
HARRY NEWTON CONSER, M. S., M. A. *Instructor in Botany*
ROBERT RUTHERFORD DRUMMOND, Ph. D.
Instructor in German
SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMOND WILBUR, B. S. *Instructor in Mathematics*
EUGENE LOUIS RAICHE, *Instructor in French (Summer Term)*
HELENE JULIE RAICHE *Instructor in French (Summer Term)*
ERNEST CLAUDE DREW, B. S. *Instructor in Physics*
VICTOR ALVIN KETCHAM, A. B., LL. B. *Instructor in English*
LLOYD MEEKS BURGHART, M. A. *Instructor in Chemistry*
ARTHUR MOSES BUSWELL, B. A.
Instructor in Industrial Chemistry
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
CLAYTON ULREY, A. B. *Instructor in Physics*
WALTER LETHBY LEIGHTON, Ph. D. *Instructor in English*
HOWARD MADISON PARSHLEY, A. M. *Instructor in Zoölogy*
WILLIAM KISLER HUFF, B. A. *Instructor in English*
EMILE SAM SAMRA, B. ès L. *Tutor in German*

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* Absent on leave.

GENERAL INFORMATION

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

1. Men and women who desire to pursue a cultural college course.

2. Men and women who desire to enter professional schools which require a collegiate degree. The B. A. degree of the University of Maine is accepted as of the first rank at the graduate departments of the best universities.

3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 47-60. They are practically the same as for other New England colleges and may be met by a four years' preparatory course in a good high school or academy.

FRESHMAN STUDIES

The work of the first year is conditioned somewhat upon the subjects offered for admission.

It is recommended that all students in this college register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR INSTRUCTORS

Each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work: biology (including zoölogy, botany, physiology, and entomology), chemistry, economics, education, English, German, Greek, history, Latin, mathematics and astronomy, philosophy, physics, Romance languages (including French, Spanish, and Italian).

In many cases the selection of a major subject need not be made before

the beginning of the sophomore year. A student may change his major subject with the consent of the deans of the colleges concerned; but no student will be graduated who has not finished all the work required for graduation in some one department, no matter how much work he may have done in other departments. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this amount must be made up from such other related departments as the professor under whose direction the major subject is taken may prescribe. The remainder of the student's work may be selected from any department or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject, and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his major instructor, and during the remainder of the course this instructor acts as chief adviser in all matters relating to the curriculum, and is a representative of the student before the faculty.

THE BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The curriculum demands a 25 credits course and is regularly completed in four years; but a student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years on their college course.

No outline of the curricula in the College of Arts and Sciences is given in the catalog, but students may have such an outline presented to them by applying to the professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology. To meet the needs of students desiring a year of college work for admission to a medical school, a schedule of subjects has been outlined. These include: Biology 1; Chemistry 1, 2, 3, 4; English 4, 5; French or German 3a, 3b; Military Science 1.

GRADUATE CURRICULA

The candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and master's degree.

No work done before the conferring of the bachelor's degree may be counted towards the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study shall be submitted to and approved by the committee on graduate degrees.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of his major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject which may count for not more than three of the required fifteen hours.

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires two hours of preparation.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek.

ASTRONOMY

Courses in astronomy are described under the department of mathematics.

BIBLIOGRAPHY

Professor Jones

1. Bibliography.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbinding and the care of books; library processes and aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.* Spring semester.

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen. Fall semester.

BIOLOGICAL CHEMISTRY

The courses in this department are described under the College of Agriculture.

BIOLOGY

Professor Chrysler; Assistant Professor Boring; Mr. Conser; Mr. Parshley

The course in General Biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

1. General Biology.—This course is designed to be part of the education of any college student and is open to all candidates for the B. A. degree, as well as to more special students. It is regarded as essential for all students in the College of Agriculture, including those taking the Forestry Curriculum, as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further

work in either zoölogy or botany. In the laboratory each student studies with the microscope, or dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily. Recitations, *three hours a week;* laboratory, † *four hours a week.* Throughout the year.

18. Principles of Breeding.—A general review of the facts that form the basis of our knowledge of inheritance. General Biology is required as a preparation for this course. Recitations, *two hours a week.* Fall semester.

19. Sanitary Science.—Attention is given to the conditions that influence individual and public health. This includes the nature of diseases, their transmission and control, and matters of personal and community sanitation that are often violated and should be understood. Recitations, *two hours a week.* Spring semester.

Zoology

2. Vertebrate Zoölogy.—Types of the Vertebrata are studied and their structures compared. Careful dissections are made of representatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by General Biology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

3. Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and the methods of preparing them for microscopic study. Students thus becoming familiar with hardening, embedding, sectioning, staining, and mounting, and to some extent with injecting blood vessels for the microscopic study of the vascular supply of organs. Recitations, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

5. Animal Physiology.—This is intended for those who already have an elementary knowledge of general biology and physiology. The course deals with the functions of the organs of the body and is accompanied by laboratory work to illustrate their activities. It should be preceded by Animal Histology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

6. Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes recitations on the comparative embryology of vertebrates and laboratory work on the frog, fish, and chick, and to some extent on the pig. Animal Histology is desirable as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

7. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

8. Entomology.—This course opens with the study of the anatomy and development of insects, after which typical species of the Orders are studied with reference to their structure, habits, life-histories, and adaptations. Due attention is given to the economic problems. General Biology is required as a preparation. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

Botany

10. Plant Histology.—The microscopic structure of the higher plants; the various tissues; the root, stem, leaf, and spore-bearing organs; the adaptations of plants to external conditions, considered from the standpoint of structure; killing, sectioning, staining, and mounting of plant tissues. This course must be preceded by General Biology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

11. Plant Physiology.—The plant is considered from the standpoints of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth, movement in response to stimuli. This course must be preceded by General Biology, and should follow Plant Histology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

12. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. Courses which have recently been given under this caption include: Morphology of Pteridophytes; Structure and technology of woods; Structural and physiographic Ecology; Advanced Plant Physiology; Special problems assigned to individuals. *The time varies and the work may be continued a number of semesters.* Fall and spring semesters.

13. Elementary Botany.—Studies in the structure and functions of the organs of plants; agents of pollination and the distribution of seeds and fruits; exercises in plant analysis and the identification of species in the field. Required of Short Pharmacy students. Recitations, *one hours a week;* laboratory † *four hours a week.* Spring semester.

14. Pharmaceutical Histology.—Exercises on the use of the microscope; the magnification of objects and microscopic measurements. A study of cells and tissues, and food products found in them; followed by exercises in the detection of the common adulterants of familiar drugs. Open to students who have taken elementary botany. Recitations, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

15. Plant Ecology.—Presents briefly two aspects of the subject: (1) Physiographic Ecology studied in the field as far as the season permits; (2) Structural Ecology, viz., the histological features characteristic of plants growing in extreme habitats, and of those having special modes of nutrition. This course must be preceded by Plant Histology. Recitations, *one hour a week;* laboratory, † *four hours a week.* Spring semester of even years.

16. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by General Biology and may profitably be preceded by Plant Histology. Recitations, *two hours a week;* laboratory, † *two hours a week.* Spring semester of odd years.

17. Forest Botany.—This course consists of a systematic study of trees and shrubs, particular attention being given to those of the eastern states, and the identification of them in summer and winter aspects. Special attention is given to the forest trees of commercial value and

their geographical distribution. Field work in the identification of local species and preparation of a forest herbarium are required in the autumn and early winter months. The course includes dendrology and forest ecology. This course must be preceded by General Biology. Recitations, *two hours a week;* laboratory, † *four hours a week.* Throughout the year.

CHEMISTRY

The courses in this department are described under the College of Technology.

ECONOMICS AND SOCIOLOGY

* Professor Sprague; Professor Stephens

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics, production, distribution and consumption, values, commerce, labor problems, and various other topics in this field of study. Required of junior engineers and of all who take course 1b. Open to others by special permission. Text-book and general discussions. *Two hours a week.* Fall semester.

1b. Advanced Political Economy.—This course is devoted to a more exhaustive study of special subjects in the economic field, labor unions, methods of arbitration, tariff history and problems, trusts and their regulation, railroads, insurance, business organizations, immigration, exhaustion of natural resources, and other special topics. This course is open to all who have had or are taking course 1a. Lectures, readings, papers, and discussions. *Three hours a week.* Fall semester.

2a. Money and Banking.—An introductory course to the study of money, banking and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take course 2b. Open to others by special permission. Text-book and lectures. *Two hours a week.* Spring semester.

* Absent on leave.

2b. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. Open to all who have taken or are taking course 1a, to others only by special permission. *Three hours a week.* Spring semester.

3a. Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the state and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. General sociological theory will occupy the last weeks of the semester. This course is open to those who have taken course 1a, and to others only by special permission. Students planning to take this course are advised to take course 3b the preceding year, although it would be possible to take both courses in the same year. Lectures, readings, and discussions. *Three hours a week.* Fall semester.

3b. Anthropology.—The evolutionary origin and history of man; characteristics of primitive man; departure from the animal status and beginnings of civilization; development of industries, arts, and sciences; growth of language, warfare, migrations, and social institutions. Open to all students. Students planning to specialize in economics are advised to take this course before taking course 3a. Text-book and lectures. *Two hours a week.* Given in the fall term of even years.

4a. Social Reforms.—Socialism, communism, and communistic settlements, anarchy, nihilism, European systems of workingmen's insurance, trade union, relief associations, and other efforts providing against old age and misfortune. Lectures and readings. Open to those who have taken course 3a and to others by special permission. *Three hours a week.* Spring semester.

4b. Ethnology.—Principles underlying racial distinctions. The origin and characteristics of races or general ethnic groups. The great migrations and changes worked by new environments and conflicts. Modern racial problems in America, Europe, and Asia. Open to those who have taken courses 3a or 3b. Lectures, readings, and discussions. *Two hours a week.* Given in the spring semester of odd years.

5. International Law.—The principles, history, and prominent "cases" of international law take up most of the course. Considerable attention will be given to American diplomacy and the most important foreign treaties. Text-book, lectures, and discussions. *Two hours a week.* Fall semester of odd years.

6. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights; contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week.* Spring semester.

7a. Governments of Europe.—A brief review of the ancient types of government followed by a detailed comparative study of modern European national governments. Political parties and current national problems will receive some attention. Lecture course with readings. *Two hours a week.* Fall semester.

7b. Municipal Government.—A study of the systems of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. Lectures and readings. *One hour a week.* Given in the fall semester of even years.

8. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. Lectures and readings. *Two hours a week.* Spring semester.

9. Democracy, Its History and Institutions.—The class will study the beginnings and development or early forms of Democracy and trace the great world movement down through the ages to the present. The greater part of the time will be given to a study of the current democratic movements in Europe, Australasia, and the American States. Lectures and readings. *Two hours a week.* Given in the spring semester of even years.

10. Economic History.—The leading facts of the economic history of Europe and America, introducing the student to the fundamental causes which lie behind much of narrative history, and examining the material and industrial resources which make the wealth of nations. Lectures and readings. Open to all students. Recommended for students planning to take other economics courses. *Two hours a week.* Given in the fall semester or odd years.

Suggestions for students planning to major in Economics and Sociology.

Freshman Year:

No major work should be taken, but the time should be given to the completion of required subjects.

Sophomore Year:

History of all kinds is desirable but "Medieval and Modern History" and the "Social and Industrial" History of Europe and America are especially advised. Biology and psychology are also useful in preparation for the major studies.

Ec 1a and Ec 2a, or Ec 7a and Ec 9a, or Ec 3b and Ec 4b, or Ec 5 may be taken, but never more than two of these courses.

Junior Year:

Any of the "Economics and Sociology" courses suggested for the Sophomore year and not taken should be finished this year. Economics should be completed if convenient.

Senior Year:

Ec 3a, Ec 4a, and Ec 6 should be completed in this year.

The graduating thesis should be arranged for at the beginning of the year and completed by March 1 previous to graduation.

Summer Term

Money and Banking.—An introductory course to the study of money, banking and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings

of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take course 2b. Text-book and lectures.

Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the state and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. General sociological theory will occupy the last weeks of the term. Lectures, readings, and discussions.

Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-books, readings, and discussions.

EDUCATION

Professor Jones

1. History of Education.—From the Greeks to Rousseau. Ideals of education at each stage of development; their sources, and modification through the intellectual life and convictions of the people; organization of instruction and the results obtained. *Three hours a week.* Fall semester.

2. History of Education.—Course 1 continued,—the development of education traced down to the present time. *Three hours a week.* Spring semester.

3. Organization and Administration.—Growth of present conceptions of education in the United States; organization of education in the different states; also in Germany, France, and England; comparative study of education in three typical states—Massachusetts, New York, and California—and special study of the school system of Maine. *Three hours a week.* Fall semester.

4. Organization and Administration Continued.—Problems within the state; town schools and city schools; duties of all officers; certification; of teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.* Spring semester.

5. Foundations of Education.—Avenues through which knowledge reaches the child and methods of effective approach. Training in analysis, synthesis, and reasoning; inculcation of habits of attention, discrimination, judgment; methods of imparting instruction by topical recitation, question, and exposition; the use of examination, note-book, library, and laboratory methods. *Three hours a week.* Fall semester.

6. Special Methodology.—All high school teachers, principals, and superintendents should be specialists in some high school subject. After conference with his major instructor, a course of study, reading, and practice will be mapped out for each student, in the methods most applicable in his specialty. *Two hours a week.* Spring semester. Open to those only who have taken Course 5.

8. Child Study.—The physical child. Order of development of the mental powers; adolescence; adaptation of studies to the child. *Two hours a week.* Spring semester. Open to those only who have taken Course 5.

9. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory in our public schools. Among the problems that students investigate are:

1. The introduction of motor activities in the first four grades.

2. The value of percentage grading in estimating acquired power and knowledge in the higher grades.

3. The causes that lead pupils to leave school at or before the completion of the work of the grammar grades.

4. The value of repeating the year when pupils of the grammar grades fail of promotion, etc. *Two hours a week.* Fall semester.

Summer Term

(Professor Hockenberry)

1. Principles of Education.—The design of the course is to set forth (1) the meaning and aims of education as related to the individual and society; (2) the relative educational value of studies and their organization into the curriculum, as indicated by the recapitulation, culture epoch, formal discipline, and other theories; and (3) the methods of teaching as determined by the mental processes involved, particularly, instinct, habit, attention, interest, apperception, induction, and deduction.

2. Foundation of Education.—Studies in the nervous and mental organization of man with special reference to his capacity for education. The central nervous system, the brain, and the special senses will be studied with reference to their functions and contributions to education. Speech and the higher mental processes will be considered to establish a scientific procedure in instruction.

3. Child Study.—Studies of the child from birth to maturity; the physical child; the order of development of the mental powers; adolescence; adaption of studies to the child

ENGLISH

Professor Gray; Professor Thompson; *Professor Daggett; Mr. Prince; Mr. Ketcham; Doctor Leighton; Mr. Huff

Two credits in English are required for the B. A. and B. S. degrees. These credits are obtained somewhat differently in the several colleges:

(1) in the College of Arts and Sciences by taking, during the Freshman year, courses 3, 4, 1a, and 1b; and during the Sophomore year in 1911-12 courses 2a and 2b or 2c and 2d; beginning with the fall of 1912 courses 8a and 8b will be substituted; (2) in the College of Agriculture by taking, in the Freshman year, courses 3 and 4; in the Sophomore year courses 1a and 1b (for 1911-12 1a will be given two hours a week,

* Absent on leave.

but 1 hour a week subsequently); in the Junior year, beginning with the fall semester of 1913, courses 17 and 14; (3) in the College of Technology by taking 3, 4, and, for the present, 3b and 4b; and in the Sophomore year, for 1911-12, courses 2a and 2b; beginning with the fall of 1912, courses 1a and 1b will be substituted.

English 3 and 4 are pre-requisite, in all colleges, for courses of the Sophomore year. The required courses of the Freshman and Sophomore years may not be postponed until the Junior or Senior year, without permission of the head of the department.

Elective courses in this department should be taken, so far as practicable, in the following order:

First year: Courses 6, 7.

Second year: Courses 6, 7, 8, perhaps 5a and 5b, 15, 20, 21, 31.

Third year: Courses 9, 10a and 10b, 11a and 11b, 12a and 12b, 13, 15, 16a and 16b, 18a and 18b, 19a and 19b, 20, 21, 23, 26.

Fourth year: Courses 10a and 10b, 12a and 12b, 13, 9a and 9b, 23, 26, 18a and 18b, perhaps 24, 25, 27, 30.

Students are expected to consult the head of the department, if they find it necessary to make a change.

Courses in Composition

3. English Composition and Rhetoric.—The object of this course is to give training in writing correct and clear English. One composition written outside of class and about two themes written in class are required each week. The theoretical work consists in the study of the fundamental principles of good usage in English writing; and of the narrative and descriptive forms of composition. In illustration of the theory many selections from literature are studied. This course is prescribed for freshmen. Each section is limited to twenty students. *Two hours a week in sections.* Fall semester.

4. English Composition and Rhetoric.—The object of this course is the same as in course 3. The theoretical work consists in a study of the more elementary principles of exposition and argumentation. Practice in making outlines and briefs; themes and fortnightly essays. This course is prescribed for freshmen. Each section is limited to twenty students. *Two hours a week.* Spring semester.

3p. Composition.—This course is open only to freshmen in the College of Technology. The object of the course is to give practice in certain practical forms of composition such as note taking, business letters, reports of scientific data, etc. Part of the time at the outset is devoted to instruction in the use of the library and to bibliography. Some time is also spent on the fundamental principles of logic. *Two hours a week.* Fall semester.

2a and 2b. Expository Composition.—A lecture course of one hour on the theory of exposition. A second hour is devoted to writing in order to cultivate facility; monthly essays and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

2c and 2d. Argumentative Composition.—A lecture course of one hour on the theory of argumentation. A second hour is devoted to making briefs and writing short arguments in order to cultivate logical methods and facility; monthly essays, and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Pre-requisites: English 3, 4, 2a, and 2b, or 2c and 2d, and 8. *Two hours a week.* Fall semester.

17. Composition.—This course gives practice in technical journalism and news writing, in making reports, and summaries of investigation, and in the preparation of theses. Open only to juniors in the College of Agriculture. *Two hours a week.* Fall semester.

Courses in Public Speaking

1a and 1b. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first term consists in voice train-

ing by means of practice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second term the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students' own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. During the year the sections will meet *once a week*. Open only to freshmen in the College of Arts and Sciences.

1a[1] and 1b[1]. Public Speaking for Sophomores in the Colleges of Technology and of Agriculture.—This course is entirely practical; the formal discussion of the theory of elocution is excluded. The work consists in the writing and delivery of speeches upon subjects in which the student is interested and informed. Speeches, argumentative or otherwise, will be written and delivered as if before a business corporation, a grange, an electrical engineering, or other scientific society, a political organization, etc. Conferences will be held for criticism. *One hour a week*. Fall and spring semesters.

18a and 18b. Debating.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading questions of the day debated. *Two hours a week*. Pre-requisites 1a and 1b, or 1a[1] and 1b[1], 3, 4, 2c, and 2d. Given in 1911-1912.

22. Oral English.—A fundamental course in voice production, diction, and interpretation of literature. Practice in reading lyric, narrative, and dramatic forms with constant application to the requirements of public speech. Not given 1911-1912.

23a and 23b. Public Speaking.—Forms of address. A study of persuasion applied to letters, editorials, and speeches for various occasions. Preparation of public addresses, and practice in extempore speaking. *Two hours*. Fall semester. An elective course open to juniors in all colleges.

Courses in Language and Literature

4p. Literature.—The careful reading of a few masterpieces of prose and poetry. Open only to freshmen in the College of Technology. *Two hours a week.* Spring semester.

5a. Old English (Anglo Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German. Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Fall semester. Given in odd years.

5b. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary and archæological interests. *Three hours a week.* Spring semester. Given in odd years. Pre-requisite 5a.

6. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall semester.

7. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring semester.

8a. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the freshman or sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.* Fall semester.

8b. History of English Literature.—A continuation of 8a, covering the periods from the seventeenth century to the present day. *Three hours a week.* Spring semester.

9a. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader. Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Fall semester. Pre-requisite 5a. Given in even years.

9b. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical, and literary interests. *Three hours a week.* Spring semester. Given in even years.

10a. Shakspere and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakspere, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakspere, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Fall semester. Given in 1911-1912 and alternate years.

10b. Shakspere.—A detailed study of three or four great tragedies of Shakspere. *Two hours a week.* Given in 1911-12 and alternate years.

11a. American Literature.—A lecture course giving an historical outline, with assigned reading. *Two hours a week.* Fall semester. Prerequisite 8a and 8b.

11b. American Literature.—A continuation of 11a. *Two hours a week.* Spring semester.

12a. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.* Fall semester. Given 1911-12 and alternate years.

12b. The Novel.—A continuation of 12a. *Two hours a week.* Spring semester. Given in 1911-12 and alternate years.

14.—Literary Types.—Great books, typical of the several forms of literature, will be read; and an endeavor made to cultivate an appreciation of the best, both in prose and poetry; and to acquire critical

knowledge of what constitutes a great drama, a great epic, a great lyric, a great novel, etc. Open only to juniors in the College of Agriculture. *Two hours a week.* Spring semester.

15. Victorian Poets.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in the poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.* Fall and Spring semesters.

16a. History of English Literature.—A lecture course giving a brief survey of the development of English literature, extending to the close of the sixteenth century. Assigned reading and reports. *Two hours a week.* Fall semester. Open to technical students only.

16b. History of English Literature.—This course continues the work of 16a, covering the periods from the sixteenth century to the present time. *Two hours a week.* Spring semester. Open to technical students only.

19a. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Fall semester. Given in 1911-12 and alternate years.

19b. Elizabethan Poetry and Prose.—A continuation of course 19a. The study of Elizabethan poetry will be completed, and the larger part of the semester given to the study of the prose of the period. *Two hours a week.* Spring semester. Given in 1911-12 and alternate years.

20. English Romantic Poets.—A general view of the English Romantic Movement with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thomson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Fall semester. Given in 1912-13 and alternate years.

21. English Romantic Poets.—A continuation of course 20. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Spring semester. Given in 1912-13 and alternate years.

5a and 5b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates.

22. Cynewulf.—Reading of The Christ, and The Elene; and possibly some of the poems attributed to Cynewulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Pre-requisite, 5a and 5b. *Three hours a week.* Fall semester.

9a and 9b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates. Pre-requisites, 5a and 5b.

27. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.* Fall and spring semesters.

24. The Victorian Period (1830-1900).—A study of the literary, social, and scientific movements in England and America, the rise of periodical literature, tractarianism, Pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thackeray, George Eliot, Jane Austin, and the Brontes. *Two hours a week.* Fall and spring semesters.

25. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, drama, and the English metres. *One hour a week.* Spring semester.

26. History of the English Drama.—Especial attention is given to the immediate predecessors, and the contemporaries of Shakspere. *Two hours a week.* Given in 1912-13 and alternate years. Fall and spring semesters.

27. Teachers' Course in English.—This course is conducted in co-operation with the department of education. It is open only to majors in English, and of these only, as a rule, to seniors and graduate students. The work is mainly practical with some theory. The students are appointed teachers of English composition and literature in the

Short Course in Agriculture. The teaching is done under the constant supervision of the professor of education and the professor of English. Both professors serve as critic teachers and hold conferences. One hour a week is devoted to the theory of teaching. A special certificate will be given for the satisfactory completion of this work. As a rule, only those who have taken this course will be recommended by the department of English as teachers of English.

30. Literary Seminar.—Not given in 1911-1912. Fall and spring semesters.

SUMMER TERM

Professor Gray; Mr. Wright; Mr. Weimar

1. Two courses in preparatory English.—The work is designed for two classes of students: (1) those who have entrance credits to make in this department; (2) those who expect to teach the subjects in High Schools.

   a. English Composition. The purpose of this course is to give a thorough drill in correct writing. Special attention will be given to spelling, grammar, punctuation, sentence, and paragraph formation. *Three hours a week.*

   b. English Literature. A careful, yet necessarily rapid, study of Shakspere's Macbeth, Milton's Lycidas, Comus' L'Allegro, and Il Penseroso, Burke's Speech on Conciliation with America, and Macaulay's Life of Johnson. *Five hours a week.*

2. English Composition and Rhetoric.—The work in this course is similar to that of the fall semester of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-books used will be Woolley's Hand-book of Composition, Carpenter's Model English Prose, Gray's College Theme Tablet. *Five hours a week.*

3. English Composition.—The work in this course is similar to that of the spring semester of the freshman year in the University. The theoretical work consists in a study of the more elementary principles of exposition and argumentation. Practice in making outlines and briefs; themes and six essays. This course will be given if a sufficient number elect it. *Five hours a week.*

4. Nineteenth Century Literature.—This course consists of a study of the social and literary impulses of the early nineteenth century, and considerable reading in such prose writers as Carlyle, Emerson, Newman, Ruskin, Arnold, and Stevenson; and in such poets as Wordsworth, Coleridge, Byron, Shelley, and Keats.

5. The Development of the Drama.—The origin and growth of the drama is traced down to the closing of the theatres. Typical plays are read and discussed. If there is time, an early, and a late play of Shakspere will be read. Not given in 1911.

6. Shakspere.—This course includes introductory lectures on the life and art of Shakspere with a study of an early and a late comedy, and an early and a late tragedy. If there is time, lectures and collateral reading on the stage and the Elizabethan people. *Five hours a week.*

7. Old English (Anglo-Saxon).—This course consists of a study of English literature between the 8th and the 12th centuries. Selections from Anglo-Saxon prose and poetry are read with attention to grammar, phonology, the relation of the Anglo-Saxon to modern English, archæological, historical, and literary interests. This course is offered especially for those who intend to teach English, and will be given if a sufficient number elect it.

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry.

GERMAN

Professor Thompson; Doctor Drummond; Mr. Samra

1 and 2. First Year German.—A course for beginners. German composition; numerous texts read; conversation. *Five hours a week* throughout the year.

3a, 3b. Second Year German.—A course for students who have had courses 1, 2 or equivalent. The grammar study, composition and text reading are progressively advanced from courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

4a, 4b. Third Year German.—A course for students who have had courses 1 and 2 and 3a, 3b or equivalent. Texts include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week* throughout the year.

5a, 5b. Fourth Year German.—An advanced course for students who have had courses 1, 2, 3a, 3b and 4a, 4b or equivalent. Texts include 19th century literature; advanced composition with original themes; lectures on history of German literature completed. *Three hours a week* throughout the year.

These courses are carefully graded in difficulty and are to be taken in the order named.

For the convenience of engineering students and those who cannot take courses 1 and 2 (five hours a week) the following two courses are offered in which the work of courses 1 and 2 can be completed in two years.

1a, 1b. Elementary German.—Study of grammar, composition and easy texts which contain a practical vocabulary. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

2a, 2b. Continuation of Course 1a, 1b.—More advanced study of grammar, composition and texts. Open to students who have completed courses 1a, 1b or equivalent. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

Note.—Course 2a, 2b is not equivalent for course 3a, 3b.

6a, 6b. German Conversation.—*Two hours a week* throughout the year.

7a, 7b. FAUST.—Reading of Faust (first part); selection from second part; study of Faust literature; lectures on the origin and development of the Faust idea. *Two hours a week* throughout the year.

8a, 8b. HISTORY OF GERMAN LITERATURE.—Lectures with assigned readings. *One hour a week* throughout the year.

9a, 9b. HISTORY OF THE GERMAN NOVEL.—Lectures given in even years. *Two hours a week* throughout the year.

10a, 10b. HISTORY OF THE GERMAN DRAMA.—Lectures given in odd years. *Two hours a week* throughout the year.

11a, 11b. SCIENTIFIC GERMAN.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week* throughout the year.

12a, 12b. HISTORY OF GERMAN EDUCATION.—Lectures. *One hour a week* throughout the year.

13a, 13b. OLD HIGH GERMAN.—Wright's Old High German Primer; Braune's Althochdeutsches Lesebuch. Open to graduates and those whose major is German. *Two hours a week* throughout the year.

14. GOTHIC.—Conditions for electing this course are the same as for course 13a, 13b. Wright's Gothic Primer. *Two hours a week.* Fall semester.

15. MIDDLE HIGH GERMAN.—The conditions for electing this course are the same as for course 12 and 13. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.*

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

Summer Term

(Doctor Drummond)

1. Elementary Course.—For those who wish to acquire or review the essentials of German grammar and the foundations of a German vocabulary.

2. Second Year German.—This course is designed for students who have completed a year's work in German or for such teachers as may wish to review their work in this department.

3. Conversational German.—For those who have taken at least one year of German and wish to get practice in speaking and hearing German. German stories will be reproduced orally and in writing. There will also be German dictation and memorizing of German songs. *Twice a week.*

4. German Literature.—A brief course of lectures covering a period of German literature. This course is designed for advanced students. *Three times a week.*

Other advanced courses in German may be substituted for Courses 2 and 4 if they seem better adapted to the needs of the students.

GREEK AND CLASSICAL ARCHAEOLOGY

Professor Huddilston

The department of Greek is arranged with the idea of presenting to the student an opportunity of becoming acquainted with several phases of Hellenic civilization and such courses are offered as will prove serviceable not only to those pursuing the classical languages but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college curriculum some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

Courses 1-10 cover the field of Greek language in its several periods of poetry and prose and assume the usual preparatory work in Greek.

1. Xenophon.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall semester.

2. Homer.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring semester.

3. Attic Orators.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall semester.

4. Greek Tragedy.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring semester.

5. Thucydides.—Books II-III. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Three hours a week.* Fall semester. Open to students who have taken courses 1 and 3.

6. Aristophanes.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. Open to students who have taken courses 2 and 4. *Two hours a week.* Spring semester.

7. Plato.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. Open to students who have taken courses 3 and 5. *Two hours a week.* Fall semester.

8. Pindar.—The Olympian and Pythian Odes; supplementary reading on the history of Greek lyric poetry. *Two hours a week.* Spring semester.

9. Greek Prose Composition.—A course in writing Greek, intended to continue the work begun in course 1. *One hour a week.* Spring semester.

10. Greek Prose Composition.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall semester.

Courses 11-17 offer an introduction to the literature, religion, customs, art, and history, and are adapted to the needs of students who may wish to devote only a year or two to Greek subjects.

11. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of Greek based on the text. *Five hours a week.* Fall semester.

12. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose selections from Homer's Iliad. *Five hours a week.* Spring semester.

13. Greek Private Life.—Lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.* Given in the fall semester.

14. Greek Religion.—A study of the chief divinities in ancient Greek religion. Lectures and assigned reading. Investigation of special topics by members of the class. *Two hours a week.* Given in the spring semester.

15. Greek Literature.—A general view of the rise and development of the literature of ancient Greece with special emphasis upon the literary standards established by the Greeks; assigned readings in translation and investigation of special topics supplemented by lectures. *Three hours a week.* Fall semester of odd years.

16. Greek History.—A brief survey of the Pre-Greek nations with reference to their legacies to civilization, followed by the history of Greece from the earliest times down to the absorption of Greece by Rome. The development of political ideals, and the forces that were basal in Greek civic life and government will be kept to the front. Oman's History of Greece will be used, accompanied by collateral reading and lectures. Open to all students. *Three hours per week.* Fall semester of even years.

17. Greek Fine Arts.—The entire question, so far as time allows, of the development of art among the ancient Greeks will be discussed in lectures illustrated by the use of the stereopticon and photographs. Greek sculpture as representing the largest part of the extant remains of ancient art will receive the most attention; but the survey will include architecture, and painting, and the minor art of pottery. The aim of the course will be to present a definite notion of the part that art played in the intellectual life of the Greeks and the significance of this legacy to succeeding ages. *Three hours a week.* Spring semester.

18. History of Old Testament Literature.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Old and New Testament Canons will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Fall semester. Not given in 1912-1913.

19. History of New Testament Literature.—A continuation of course 18. Open to all students. *One hour a week.* Spring semester. Not given in 1912-1913.

The following courses in the history of art bearing chiefly upon the influence of classical ideals in the Italian Renaissance are given at present as under the department of Greek:

1. Art.—The revival of the fine arts in Italy, with special reference to the history of painting in Tuscany and Umbria during the early Renaissance. Lectures and collateral reading. The work is illustrated by a large and growing collection of photographs and casts. *One hour a week.* Fall semester of even years.

2. Art.—A continuation of course 1, dealing chiefly with the masters of the high Renaissance in Florence and Rome. *One hour a week.* Spring semester of odd years.

3. Art.—Painting in the north of Italy, and the culmination of the Italian Renaissance in the Venetian masters. Lectures and collateral reading. *One hour a week.* Fall semester of odd years.

4. Art.—A continuation of course 3. *One hour a week.* Spring semester of even years.

5. Architecture.—A chronological survey of the development of ancient and modern architecture down to 1600 A. D. Greek and Roman architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures, outside reading, and detailed study of the reproduction in the Art Collection. Open to all students. *Two hours per week* for the year. Given in 1910-11.

6. Architecture.—A continuation of course 5. *Two hours a week.* Spring semester. Given in 1910-11.

HISTORY

Professor Colvin

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesiastical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Open to all students. *Three hours a week.* Fall semester.

2. Modern History.—Continuation of course 1 to the present time. A rapid survey of the Reformation; the absolute monarchy in France; the French Revolution; the Napoleonic era; Europe in the nineteenth century. Open to all students. *Three hours a week.* Spring semester.

Courses 1 and 2 will be given in 1912-1913.

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Open to all students. *Three hours a week.* Fall semester.

4. History of England.—Continuation of course 3. From the beginning of the Stuart period to the present. Open to all students. *Three hours a week.* Spring semester.

Courses 3 and 4 are given in 1911-1912.

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.* Fall semester.

6. History of the United States.—The period from 1783 to 1848. This course will begin with a brief study of Colonial history from 1750. Open to all students. *Three hours a week.* Fall semester.

7. History of the United States.—A continuation of course 6, from 1848 to the present time. Open to all students. *Three hours a week.* Spring semester.

8. Industrial and Social History of England.—The medieval manor, town, guild, and foreign trade; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. *Two hours a week.*

[The following courses are open only to advanced students.]

9. The Renaissance and the Reformation.—The period from 1300 to 1648 A. D. *Two hours a week.*

10. The Renaissance and the Reformation.—A continuation of course 8. *Two hours a week.*

11. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

12. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

13. Modern Continental Europe.—The period since 1815. *Three hours a week.*

14. Historical Construction and Criticism.—*One hour a week.*

Greek History and Roman History are given in the departments of Greek and Latin.

Summer Term

1. United States History.—A brief course of two recitation periods a week, reviewing the work done in preparatory school. This course is designed to prepare a student who has taken the course in United States History for the entrance examinations of the University.

2. English History.—This course will be given three times a week, and has a purpose similar to that of the course in United States History.

3. Modern European History.—A course designed for teachers and graduate students. It covers the history of Western Europe from 1500 to date. *Five hours a week.*

4. Advanced History.—A course in Advanced History will be offered to graduate students and others who are prepared to take it. The character of the work will be determined by the requirements of the students who elect it.

LATIN

Professor Chase

Courses in Latin 1, 2, fulfill the classical requirements for the B. A. degree.

1. Livy and Composition.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four times a week.* Fall semester.

2. Cicero and Horace.—Cicero, De Senectute; Horace, Odes and Epodes; Latin composition. *Four times a week.* Spring semester.

Courses 1 and 2 are required of candidates for the B. A. degree who elect Latin.

3. Terence and Plautus.—The Andria, Adelphoe, or Phormio of Terence; the Captivi, Trinummus, or Menaechmi of Plautus; lectures on the development of Roman comedy. *Three times a week.* Fall semester.

4. Tacitus and Cicero.—The Agricola and Germania of Tacitus; selected letters of Cicero. *Three hours a week.* Spring semester.

5. Latin Composition.—Practice in writing Latin; study of Latin syntax. *One hour a week.* Fall semester.

6. Latin Composition.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.* Spring semester.

7. Pliny and Tacitus.—Selected letters of Pliny the Younger; readings in the Annals of Tacitus; the Roman Empire. *Two hours a week.* Given in the fall semester of even years.

8. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; lectures on the elegiac poets. *Two hours a week.* Given in the spring semester of odd years.

The following may be counted toward the Master's degree:

9. Roman Satire.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius. Open to students who have taken, or are taking, courses 3-4, or 7-8. *Two hours a week.* Given in the fall semester of odd years.

10. Roman Satire.—A continuation of course 9. *Two hours a week.* Given in the spring semester of even years.

11. Roman Philosophy.—Cicero (selections from the Academica, De Officiis, Tusculanæ Disputationes, De Finibus, De Natura Deorum); lectures on the history and development of ancient philosophy. Open to students who have taken, or are taking, courses 3-4 or 7-8. *Two hours a week.* Given in the fall semester of even years.

12. Roman Philosophy.—A continuation of course 11. *Two hours a week.* Given in the spring semester of odd years.

13. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken courses 1-4. *Three hours a week.* Given in the fall semester of even years.

14. Roman Literature.—A continuation of course 13. *Three hours a week.* Given in the spring semester of odd years.

15. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken courses 1-4. *Two hours a week.* Given in the fall semester of odd years.

16. Roman Rhetoric and Oratory.—A continuation of course 15. *Two hours a week.* Given in the spring semester of even years.

18. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken courses 1-4. *One hour a week.* Given in the fall semester of odd years.

19a. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages. Latin Phonetics. The development of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in the fall semester of odd years.

19b. The Latin Language.—A continuation of 19a. *One hour a week.* Given in the spring semester of even years.

20. Roman Epigraphy.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring semester of even years.

21. Teachers' Course.—Discussion of topics connected with the teaching of Latin in secondary schools. Study of selected passages of Cæsar, Cicero, and Vergil. *One hour a week.* Fall semester.

22. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

23. Sanskrit.—A continuation of course 22, with more attention to the classical literature of India. *Two hours a week.*

24. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archaeolgy, etc. *One hour a week.* Given in the fall semester of even years.

25. Roman History.—The development of Rome to the time of Augustus. Lectures, reading, and recitations. *Three hours a week.* Given in the fall semester of odd years.

26. Roman History.—The Roman Empire. A continuation of course 25. *Three times a week.* Given in the spring semester of even years.

Summer Term

The Latin Department offers two distinctly different lines of study, intended to meet the needs of three classes of students.

1. For Teachers of Latin, and for Students wishing to gain Entrance Credits in Latin. One course is offered in Cicero's Speeches and one in Cæsar's Gallic War. In these two courses various questions connected with the teaching of Latin will be discussed, such as questions of spelling and pronunciation, of grammatical forms and inflections, of syntax, prosody, etc.; also questions of bibliography, methods of translation, history, mythology, literature, and the various aids to the elucidation of the authors studied, together with the fundamental principles of the Latin language.

2. For Students who desire College Credits looking to the B. A. degree. It is the plan of the department to offer a double course that shall cover the work of an entire college semester and be equivalent to that required for one college credit, and to vary this course from year to year so that a student in a few summers may complete a fairly comprehensive course of college study in Latin. The choice of subject will rest partly with the class. We call the especial attention of secondary school teachers who have not had the advantage of complete college training in Latin to these courses, as we believe they afford an unusual opportunity to them to increase their equipment.

MATHEMATICS AND ASTRONOMY

Professor Hart; *Assistant Professor Willard; Assistant Professor Hamlin; Mr. Reed; Mr. Chambers; Mr. Wilbur

Students electing mathematics as a major subject should expect to take courses 1, 2, 4, 6, 7, 8, 11, 12, 13, 15, 19, 20, 21 and either courses 9 and 10 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

1. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book is Stone and Millis's Solid Geometry. *Five hours a week for last ten weeks.* Spring semester. Open to all freshmen who did not offer it for admission.

2. Algebra.—A brief review of the theory of exponents, quadratic equations, and the binomial theorem; indeterminate equations; logarithms, including practice in the solution of numerical exercises; undetermined coefficients; partial fractions; exponential and logarithmic series, and the computation of logarithms; permutations and combinations; theory of equations. The text-book is Hawke's Advanced Algebra. *Five hours a week.* Fall semester, last six weeks; spring semester, first eight weeks.

4. Plane Trigonometry.—The text-book is Taylor's Trigonometry. *Five hours a week.* Fall semester, first twelve weeks.

5. Algebra and Trigonometry.—A brief review of radicals, the theory of exponents, quadratic equations, and the binominal theorem; logarithms, including practice in the solution of numerical exercises; the trigonometric functions; radian measure; functions of several angles; solution of right and of oblique triangles; trigonometric equations; inverse functions; determinants; theory of equations. The text-book is Brenke's Advanced Algebra and Trigonometry. *Five hours a week.* Fall semester.

6. Analytic Geometry.—The point, line, circle and conic sections; higher plane curves; elements of solid analytic geometry. The text-

* Absent on leave.

book is Riggs' Analytic Geometry. *Five hours a week.* Spring semester. Open to students who have had course 5 and the equivalent of course 1, or courses 2, 4 and 1.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken courses 1, 2, 4, and 6; or 1, 5, and 6. The text-book is Osborne's Differential and Integral Calculus. *Five hours a week.* Fall semester.

8. Calculus.—A continuation of course 7. Integration of the elementary forms; integration between limits; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring semester.

9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects and work in the observatory. Open to students who have taken courses 1, 2, 4, and, preferably, Physics 1 and Physics 5. The text-book is Young's Manual of Astronomy. *Three hours a week.* Spring semester.

10. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the student's own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, vertical circle, astronomical transit, and zenith telescope. Open to students who have taken courses 9, 4, and 19. *Two hours of recitations or lectures and two hours of observatory work a week.* Fall semester.

11. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken courses 1, 2, and 4, or course 5. *Three hours a week.* Fall semester.

12. Advanced Calculus.—This course is varied from time to time by using different texts. Open to students who have taken courses 6, 7, and 8. *Three hours a week.* Given in the fall semester of odd years.

13. Advanced Integral Calculus.—A continuation of course 12. *Three hours a week.* Given in the spring semester of even years.

15. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken courses 7 and 8. *Two hours a week.* Spring semester.

16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students who have taken courses 6, 7, 8, 9, 19, and, preferably, 10. *Three hours a week.* Fall semester. Given in 1910; not given in 1911.

17. Practical Astronomy.—A continuation of course 16. *Three hours a week.*

19. Spherical Trigonometry.—A continuation of course 4, with additional problems and applications to spherical astronomy. *Two hours a week.* Spring semester.

20a. Advanced Analytic Geometry.—A course for students who have completed courses 6, 7, 8 and 11. *Three hours a week.* Given in the fall semester of even years.

20b. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in the spring semester of odd years.

21a. History of Mathematics.—Lectures and recitations. *One hour a week.* Given in the fall semester of even years.

21b. History of Mathematics.—A continuation of course 21a. Given in the spring semester of odd years.

22a. Analytic Geometry and Calculus.—A course given for students in Chemistry and for those in the B. A. courses who desire only a brief course in these subjects. *Two hours a week.* Fall semester.

22b. A continuation of course 22a. *Two hours a week.* Spring semester.

For courses in mechanics and in descriptive geometry refer to the department of mechanics and drawing in the College of Technology; for courses in surveying refer to the department of civil engineering in the College of Technology.

Summer Term

(Professor Hart, Assistant Professor Hamlin, Mr. Reed)

1. High School Algebra.—A course intended for teachers in preparatory schools and covering the second year's work. Especial attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are also advised to take this course.

2. Plane Geometry.—A review of the more important theorems with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools and for candidates for admission who are slightly deficient in geometry.

3. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Bush and Clarke's Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Wells's, and other books will be used for reference.

4. Plane Trigonometry.—The solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which may be useful for reference.

5. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. Text-book to be selected at the opening of the term.

6. Analytic Geometry.—A brief course covering the elements of this subject.

7. Differential and Integral Calculus.—A course intended for teachers in preparatory schools who wish to gain a knowledge of the elements of this subject.

8. Descriptive Astronomy.—Lectures accompanied by work in the observatory.

9. Analytic Geometry, the equivalent of course Mathematics 6b, in the University Catalog.

10. Calculus, the equivalent of course Mathematics 8 in the catalog.

11. Mechanics, the equivalent of course Mechanics 5 in the catalog.

12. Mechanics, the equivalent of course Mechanics 6 in the catalog.

Note:—Nine of the above courses will be given, the choice to be determined by the number of students electing.

Courses 9, 10, 11 and 12, being review courses, may be taken only by those who have previously pursued the subject.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 199.

PHILOSOPHY

Professor Craig

Students intending to major in this department should begin with courses 1 and 10. Those wishing only a minor amount of work in philosophy may begin with any course except 1b, 8, or 9.

Philosophy 6 may be counted as three hours toward the ten hours in classics required of all candidates for the B. A. degree.

1a. Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and the psychology of sensation, perception, instinct, habit, and memory. The

methods used are recitation, discussion, introspection (self-observation), observation of others, experiment, and demonstration. Students electing this course are advised to precede or accompany it with biology 1; or if this be impossible, to read some good, recent book on evolution, and a similar work on human physiology. Two text-books: James's Psychology (Briefer Course); Judd's Psychology, General Introduction. *Three hours a week.* Fall semester.

1b. Psychology.—A continuation of course 1, dealing especially with the higher psychic functions, such as imagination, conception, emotion, and will. All students who have taken course 1a are advised to follow it with 1b. *Three hours a week.* Spring semester.

3. Ethics.—The object of this course is to aid the student to do serious thinking on the subject of morality—including all the virtues—a subject on which every college man ought to cultivate intelligent thought. *Two hours a week.* Fall semester. The text-book is Perry's The Moral Economy.

4. Social Psychology.—A study of the social aspects of the individual mind; of social influence and social control; of fashion, convention, and custom; of the crowd, the mob, the public, and the deliberative assembly. Lectures and collateral readings. *Two hours a week.* Spring semester.

5a. Inductive Logic.—A study of the method of science; the methods of gathering facts and of deriving correct conclusions from the facts. The text-book is Creighton's Logic. *Two hours a week.* Fall semester.

5b. Deductive Logic.—The purpose of this course is to develop clear thinking and the precise expression of thought in words. This is done largely by exercise in the solution of logical problems. Text-book: Creighton's Logic. *Two hours a week.* Spring semester. Courses 5a and 5b are independent of one another.

6. History of Ancient Philosophy.—Designed to give an insight into Greek and Roman thought as related to the life of the Greeks and Romans, and also to lay the foundation for a study of modern thought. Rogers's A Student's History of Philosophy is used as a text-book. *Three hours a week.* Fall semester of even years.

7. History of Modern Philosophy.—Continuation of the preceding course, but may be taken separately, having different interests, connected with modern history and modern thought in literature, science, art, and politics. Text-book as in the preceding course. *Three hours a week.* Spring semester of odd years.

8. Seminar.—For advanced students. Reviews of recent literature, both philosophical and psychological. The student may select literature on a topic in which he is especially interested. The work may be continued a number of semesters. *One hour a week.* Fall or spring semester.

9. Research.—Primarily for graduate students. *The number of hours a week* is not fixed, but must be arranged at the time of registration. Fall or spring semester.

10. Evolution.—The idea of evolution dominates all thought in our era. This course gives a broad and rapid survey of evolution in all its phases, cosmic, geologic, organic, psychic, and social. Lectures and collateral reading. *Two hours a week.* Fall semester.

11. Metaphysics.—Discussion of the bearing of philosophy upon science and upon life; materialism versus idealism; the relation of mind to matter; the nature of reality; the validity of knowledge; and similar fundamental problems. Text-book, Fullerton's Introduction to Philosophy. *Two hours a week.* Spring semester.

12. Readings in Modern Philosophy.—Given every other year, alternating with course 6 and 7 on the history of philosophy. This course also deals with the history of philosophy, taking up a single philosopher or a single period for intensive study. For students who are interested in history, literature, or modern thought and thinkers. *Three hours a week.* Fall semester of odd years and spring semester of even years.

PHYSICAL TRAINING

The courses in this department are described on page 200.

PHYSICS

PROFESSOR STEVENS; ASSISTANT PROFESSOR WOODMAN; MR. DREW; MR. ULREY

[NOTE.—For students who are specializing in this department the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.]

1. GENERAL PHYSICS.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 4. *Five hours a week.* Fall semester.

2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Three hours a week.* Spring semester.

3. QUALITATIVE LABORATORY WORK.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in courses 1 and 2. * *Five hours a week.* Fall semester.

4. GENERAL PHYSICS.—A course covering the ground of course 1, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Crew and Jones's Elements of Physics. *Five hours a week.* Fall semester.

5. LABORATORY PHYSICS.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either course 1 or course 4. * *Five hours a week.* Spring semester.

6. METEOROLOGY.—A course covering the essential principles of the subject of meteorology, including a study of meteorological instruments and weather predictions. *Two hours a week.* Spring semester.

7. Optics.—Lectures and recitations in continuation of course 1, based chiefly upon Edser's Light. Open to students who have taken Mathematics 8. *Three hours a week.* Spring semester of 1911-1912 and alternate years.

8. Optics.—Advanced laboratory work in continuation of course 5. * *Seven and one-half hours a week, or five hours a week.* Spring semester.

9. Mechanics and Heat.—Advanced laboratory work in continuation of course 5. * *Seven and one-half hours a week, or five hours a week.* Fall semester.

10. Theory of Electricity and Magnetism.—Lectures and recitations on the mathematical theory of potential, capacity, and inductance, with applications to direct current phenomena. Hadley's Magnetism and Electricity for Students is used as a text-book. *Three hours a week.* Fall semester of 1910-1911 and alternate years.

11. Electrical Measurements.—Advanced laboratory work in continuation of course 5. * *Seven and one-half hours a week.* Fall semester.

12. Theory of Electricity and Magnetism.—Continuation of course 10, with applications to alternating current phenomena. *Three hours a week.* Spring semester of 1910-1911 and alternate years.

13a. Heat.—An advanced course in Heat in continuation of course 2. The text-book is Edser's Heat. *Three hours a week.* Given in the fall semester of 1911-1912 and alternate years.

13b. Heat.—A continuation of 13a. Given in the spring semester of 1911-1912 and alternate years. *Three hours a week.*

14. Mathematical Physics.—The application of mathematical methods to the treatment of problems in physics. The text-book is Mellor's Higher Mathematics. *Two hours a week.* Spring semester of 1910-1911 and alternate years.

15. Special Laboratory Course.—A course open to students who have completed courses 8, 9, and 11. A subject is assigned for original investigation, or the work of a published research is repeated. * *Five hours a week.* Fall semester.

16. Special Laboratory Course.—A continuation of course 15. * *Seven and one-half hours a week.* Spring semester.

18. Electricity and Optics.—Advanced laboratory work in continuation of course 5. * *Five hours a week.* Fall semester.

19. Least Squares.—A course of lectures covering the more important topics treated in this subject. Required of juniors in civil engineering and elective for others who have taken Physics 1 and 2 and Mathematics 8. *One hour a week.* Fall semester.

Summer Term

(Professor Stevens; Assistant Professor Woodman)

1. An Elementary Course.—This includes the list of experiments adopted by the Maine colleges for admission in physics.

2. Advanced Laboratory Course.—Work in any laboratory course offered in the University may be taken by students in the summer term who are properly qualified.

3. College Physics.—A course based upon those parts of the text-book in physics which treat of mechanics, light, and sound. This course may be taken for credit only by students who have pursued the subject for a regular semester at the University.

4. College Physics.—A course based upon those parts of the text-book in physics which treat of electricity and heat. This course may be taken for credit by university students who have covered the ground in Physics 2, but have failed in the subject.

5. High School Physics.—A rapid survey of the ground covered in high school, based upon Millikan and Gale's text-book. This course is designed to meet the needs of teachers in high schools and it may be taken as a rapid review by students who have covered the ground in high school but have failed to pass college entrance examinations.

ROMANCE LANGUAGES

Professor Segall; Associate Professor Raggio

French

1. Elementary French.—Fraser and Squair's Abridged Grammar. Syms's Reader. *Five hours a week.* Fall semester.

2. Elementary French.—A continuation of course 1. Fraser and Squair's Abridged Grammar; Verne, une Ville flottante; Muller, les Grandes decouvertes. Collateral reading: Dumas, les Trois mousquetaires. *Five hours a week.* Spring semester.

3a. Intermediate French.—Bruce, Grammaire française; Lamartine, Histoire des Girondins (selections); France, Livre de mon ami. Collateral reading; Bruno, le Tour de la France; Lacombe; Petite histoire du peuple français. Open to students who have taken courses 1 and 2, or an equivalent. *Three hours a week.* Fall semester.

3b. Intermediate French.—A continuation of course 3a. Bruce, Grammaire française; Sand, la Mare au diable; Hugo, Quatre-vingt-treize. Collateral reading. Michelet, France et Francais; Laurie, une Annèe de collège à Paris. *Two hours a week.* Spring semester.

4a. Advanced French.—Anatole France, le Crime de Sylvestre Bonnard. Composition. Collateral reading; Modern Short Stories. Open to students who have taken courses 3a and 3b, or an equivalent. *Three hours a week.* Fall semester.

4b. Advanced French.—A continuation of course 4a. Contemporary story writers: D'Esparbès, Marin, Le Braz, Claretie, Coppée. Composition. Collateral reading: Rambaud, Petite histoire de la civilisation française. *Two hours a week.* Spring semester.

5a. Elementary French Composition and Conversation.—Open to students who have taken courses 1 and 2, or an equivalent. *Two hours a week.* Fall semester.

5b. Elementary French Composition and Conversation.—A continuation of course 5a. *Two hours a week.* Spring semester.

6a. An Introduction into the History of French Literature.—Pellissier, Histoire de la littérature française. Lectures, recitations, reports. Open to students who have taken courses 4a and 4b. *Three hours a week.* Fall semester.

6b. An Introduction into the History of French Literature.—A continuation of course 6a. Pellissier, Histoire de la littérature française. Lectures, recitations, reports. *Two hours a week.* Spring semester.

7a. Advanced French Composition and Conversation.—Open to students who have taken 5a and 5b, or an equivalent. *Two hours a week.* Fall semester.

7b. Advanced French Composition and Conversation.—A continuation of course 7a. *Two hours a week.* Spring semester.

Spanish

9a. Elementary Spanish.—Hills and Ford, Grammar; Ramsey, Reader. *Three hours a week.* Fall semester.

9b. Elementary Spanish.—A continuation of course 9a. Hills and Ford, Grammar; Alarcón, El Capitán Veneno. *Two hours a week.* Spring semester.

10a. Intermediate Spanish.—Alarcón; Galdós; Valera, Composition. Open to students who have taken courses 9a and 9b. *Three hours a week.* Fall semester.

10b. Intermediate Spanish.—A continuation of course 10a. *Two hours a week.* Spring semester.

Italian

11a. Elementary Italian.—Grandgent's Grammar; Bowen, First Italian Readings. Open to students who have taken courses 1 and 2. *Three hours a week.*

11b. Elementary Italian.—A continuation of course 11a. Composition; Goldoni, La Locandiera; Gherardi del Testa, L'oro e l'orpello. *Two hours a week.*

Summer Term

(Mr. Raiche; Mme. Raiche)

1a. Elementary Course.*—This course is intended for beginners. The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp 1-73.

1b. Continuation of Course 1a.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 73-128; Rambeau's French Reader (Henry Holt & Co.).

1c. Continuation of Course 1b.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 337-344; Rambeau's French Reader (Henry Holt & Co.).

2. Intermediate Course.—This course is intended for those who have already the required number of points for Entrance French, and who wish a course in French that may be counted towards a bachelor's degree. The text-books used will be Augier and Sandeau, Gendre de M. Poirier (American Book Co.); France, le Livre de mon ami (Henry Holt & Co.); Gasc's Concise Dictionary of the French and English Languages (Henry Holt & Co.), or Clifton & McLaughlin's New Dictionary of the French and English Language (Wm. R. Jenkins Co.). Students should bring with them their grammars.

3. Conversational French.—A course designed to familiarize the student with the common words, idioms, phrases, and constructions occurring in daily life. Conducted by Mme. Raiche. *Three times a week.*

4. Rapid Sight Reading.—A course, for students who are sufficiently advanced, in the rapid reading of a large amount of French prose and poetry. Conducted by Mme. Raiche. *Twice a week.*

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* The requirements for Entrance French may be met by taking courses 1a, 1b, and 1c in consecutive years.

† Students who already have two of the four points required for Entrance French may complete their requirements during one Summer Term by taking courses 1b and 1c.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

WILLIAM EMANUEL WALZ, M. A., LL. B., Litt. D.
Dean and Professor of Law

EDGAR MYRICK SIMPSON, B. A.
Assistant Professor of Real Property and Evidence

FOREST JOHN MARTIN, LL. B.
Resident Lecturer on Common Law Pleading and Maine Practice

GEORGE HENRY WORSTER, LL. M. *Instructor in Law*

BARTLETT BROOKS, B. A., LL. B.
Instructor in Contracts and Negotiable Paper

LUCILIUS ALONZO EMERY, M. A., LL. D., Ex-Chief Justice of the Supreme Court of Maine *Lecturer on Roman Law and Probate Law*

LOUIS CARVER SOUTHARD, M. S., LL. D., Member of the Massachusetts Bar and of the United States Supreme Court Bar
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
Lecturer on Admiralty Law

ISAAC WATSON DYER, B. A.
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

HERBERT MILTON HEATH, M. A. *Lecturer on Cross-Examination*

JOHN ROGERS MASON, M. A., LL. B.
Lecturer on Bankruptcy, Law, and Procedure

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies the Isaac H. Merrill building, recently purchased by the university, corner Union and State Streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains about 3,000 volumes, including the reports of the Federal Courts and of the Supreme Court of the United States, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the Complete Reporter System, the Lawyers' Reports Annotated, all the Law Encyclopædias, and a considerable number of text-books, as also the English Reports, full verbatim reprint, and the American Digest.

Admission

Graduates of any college or satisfactory preparatory school are admitted to the college as candidates for the degree of Bachelor of Laws without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case according to the rules of the Association of American Law Schools. Attention is called to a change made in these rules by the Association of American Law Schools at its meeting at Narragansett Pier, R. I., in August, 1905. The following resolution was then passed:

"Section one of Article VI of the Articles of Association shall be amended so that it will read as follows:

"I. It shall require of all candidates for its degree at the time of their admission to the school the completion of a four years' high school course, or such a course of preparation as would be accepted for admission to the state university, or to the principal colleges and universities in the state where the law school is located; provided, that this requirement shall not take effect until September, 1907."

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other schools which are members of the Association of American Law Schools, are admitted to classes in this institution

corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices otherwise qualified are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, on presentation of their certificates of admission to the bar at the beginning of the fall term, while graduate students may take one of the two courses leading to the degree of Masters of Laws.

Intended Increase of Entrance Requirements

In harmony with the greater demands made by the legal profession and the public, and in recognition of the fact that University standards throughout the country are being gradually raised, it is intended in course of time to go beyond these requirements, and, in addition to the high school education prescribed, two years college work may be required as a preliminary preparation of all candidates for the law degree.

Methods of Instruction

The College is not committed exclusively to any one method of instruction, and recognizes the great value of lectures by able men and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle" may, perhaps, adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the college, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorities cited, are submitted to the presiding judge.

The aim and spirit of the college are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Course of Study

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The col-

lege year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. It is believed that expenses in this department, as well as in other departments of the University, are lower than in any other New England college.,

Degrees

At the completion of the three years' course the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the course leading to the master's degree.

COURSES OF INSTRUCTION

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Agency.—Text-book, Huffcut's Cases on Agency. *Three hours a week. Spring term.* Mr. Worster.

3. Bankruptcy.—Lectures. *Two hours a week.* Winter term. Mr. Mason.

4. Brief Making and the Use of Law Books.—Text-book, Brief Making and the Use of Law Books. *One hour a week.* Fall term. Professor Walz.

5. Carriers.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

6. Carriers.—A continuation of course 5. *Three hours a week.* Winter term. Professor Simpson.

7. Common Law Pleading.—Lectures. *Two hours a week.* Winter term. Mr. Martin.

8. Common Law Pleading.—A continuation of course 7. *One hour a week.* Spring term. Mr. Martin.

9. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

10. Constitutional Law.—Boyd's Cases. *Two hours a week.* Spring term. Mr. Worster.

11. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Mr. Brooks.

12. Contracts.—A continuation of course 11. *Three hours a week.* Winter term. Mr. Brooks.

13. Contracts.—A continuation of course 12. *Two hours a week.* Spring term. Mr. Brooks.

14. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

15. Criminal Law.—A continuation of course 14. *Three hours a week.* Spring term. Professor Simpson.

16. Cross-Examination.—*Lectures.* Mr. Heath.

17. Damages.—Beale's Cases on Damages. *Three hours a week.* Winter term. Mr. Worster.

18. Domestic Relations.—Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

19. Equity Jurisprudence.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz.

20. Equity Jurisprudence.—A continuation of course 19. *Three hours a week.* Winter term. Professor Walz.

21. Equity Pleading.—Lectures. *Two hours a week.* Winter term. Professor Simpson.

22. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

23. Evidence.—A continuation of course 22. *Three hours a week.* Winter term. Professor Simpson.

24. Evidence.—Lectures. *Number of hours not fixed.* Winter term. Mr. ————

25. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

26. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

27. Federal Jurisdiction and Procedure.—Lectures. Mr. Dyer.

28. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

29. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

30. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

31. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

32. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Mr. Worster.

33. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

34. Legal Ethics.—Code of American Bar Association. *One hour a week.* Spring term. Professor Walz.

35. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Martin.

36. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

37. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

38. Negotiable Paper.—Huffcut's Cases. *Two hours a week.* Winter term. Mr. Brooks.

39. Negotiable Paper.—A continuation of course 38. *Three hours a week.* Spring term. Mr. Brooks.

40. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

41. Private Corporations.—Wilgus's Cases. *Four hours a week.* Fall term. Mr. Worster.

42. Private Corporations.—A continuation of course 41. *Three hours a week.* Winter term. Mr. Worster.

43. Private Corporations.—Lectures. Mr. Dyer.

44. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

45. Real Property.—Tiffany on Real Property. *Four hours a week.* Fall term. Professor Simpson.

46. Real Property.—A continuation of course 45. *Three hours a week.* Winter term. Professor Simpson.

47. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

48. Roman Law.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

49. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Mr. Worster.

50. Sales.—A continuation of course 49. *Two hours a week.* Winter term. Mr. Worster.

51. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Mr. Worster.

52. Suretyship.—A continuation of course 51. *Two hours a week.* Winter term. Mr. Worster.

53. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

54. Torts.—A continuation of course 53. *Three hours a week.* Winter term. Professor Walz.

55. Torts.—A continuation of course 54. *Two hours a week.* Spring term. Professor Walz.

56. What to do in Court.—Lectures. *About ten hours.* Fall or spring term. Ex-Chief Justice Emery.

57. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Mr. Worster.

THE COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

HAROLD SHERBURNE BOARDMAN, C. E.
Dean and Professor of Civil Engineering
WILBUR FISKE JACKMAN, B. S., PH. C. *Professor of Pharmacy*
ARTHUR CRAWFORD JEWETT, B. S.
Professor of Mechanical Engineering
WALTER KIERSTED GANONG, B Sc.
Professor of Electrical Engineering
CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing
CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry.
ARCHER LEWIS GROVER, B. S. *Assistant Professor of Drawing*
PAUL LEONARD BEAN, B. S.
Assistant Professor of Civil Engineering
ALBERT THEODORE CHILDS, B. S., E. E.
Assistant Professor of Electrical Engineering
WINSLOW HOBART HERSCHEL, B. A.
Assistant Professor of Mechanical Engineering
EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*
CHARLES JENKINS CARTER *Instructor in Machine Tool Work*
WALTER ELWOOD FARNHAM *Instructor in Drawing*
ERNEST CONANT CHESWELL
Instructor in Electrical Engineering
JULIUS ERNEST KAULFUSS, B. S. *Instructor in Civil Engineering*

LLOYD MEEKS BURGHART, M. A. *Instructor in Chemistry*
ARTHUR MOSES BUSWELL, B. A.
Instructor in Industrial Chemistry
RAYMOND BROWN KITTREDGE, B. S.
Instructor in Civil Engineering
CARL HENRY LEKBERG, B. S.
Instructor in Mechanical Engineering
CARL HENRY LEKBERG, B. S. *Instructor in Medical Engineering*
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
ALLEN HOLT BLAISDELL, B. S. *Tutor in Mechanical Engineering*

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, and in various branches of engineering. The number of credits required for graduation in this college is thirty. In such technical courses it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the courses described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

The Chemical Curriculum
The Chemical Engineering Curriculum
The Civil Engineering Curriculum
The Electrical Engineering Curriculum
The Mechanical Engineering Curriculum
The Pharmacy Curriculum

At graduation in any of these curricula the student receives the degree of Bachelor of Science. The diploma indicates which curriculum has been completed.

The Chemical Curriculum

This curriculum is designed for those who plan to become professional chemists and analysts or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment station. Lectures and recitations are closely associated with practical work in the laboratories.

College of Technology

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	1-2	Physical Training *2	1
	19 1-2		20

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
Chemistry 9, †4	2	Chemistry 7, 3 and †4	5
English 1a[1]	1	English 1b[1]	1
Mathematics 22a	2	Mathematics 22b	2
Modern Language	3	Modern Language	2
Military 1, *3	1	Military 1, *3	1
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	19		21

JUNIOR YEAR

Biological Chemistry 1	5	Agricultural Chemistry 4, †10	5
Chemistry 8	3	Bacteriology 1, †6	3
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 29a	2	Chemistry 32b	2
Chemistry 18, †8	4	Modern Language	2
Modern Language	3	Elective	3
	20		18

SENIOR YEAR

Chemistry 12, †6	3	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 24a	2	Chemistry 13, †3	1 1-2
Chemistry 19, †8	4	Chemistry 29b	2
Geology 6 or Chemistry 33	2	Chemistry 28, †2	1
		Chemistry 25, †4	2
Elective	3	Elective	3 1-2
	17		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Chemical Engineering Curriculum

This curriculum is especially designed for those who intend to enter industries that require a more or less extensive knowledge of chemistry, as well as some knowledge of applied mathematics and of the engineering studies, thus fitting them for positions as chemists or managers of manufacturing plants.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
German 1a or French 3a	3	German 1b or French 3b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	1-2	Physical Training *2	1
	19 1-2		20

SOPHOMORE YEAR

Chemistry 14, † 10	5	Chemistry 16, † 10	5
English 1a[1]	1	Chemistry 7, 3 and † 4	5
Mathematics 22a	2	English 1b[1]	1
Mechanical Engineering 1b, *4	1 1-2	Mathematics 22b	2
Miliary 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	18 1-2		21

JUNIOR YEAR

Chemistry 8	3	Chemistry 32b	2
Chemistry 18, † 8	4	Chemistry 19, † 8	4
Chemistry 32a	3	Chemistry 26, † 6	3
Chemistry 9, † 4	2	Chemistry 13, † 3	1 1-2
Chemistry 29a	2	Mechanical Engineering 10.	2
Mechanical Engineering 26, † 3	1 1-2	Mechanical Engineering 2, *4	1 1-2
Physics 11, *7 1-2	3	Electrical Engineering 10b.	2
		Elective	2
	18 1-2		18

SENIOR YEAR

Chemistry 24a	2	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, † 10	5
Chemistry 12, † 6	3	Chemistry 28, † 2	1
Chemistry 33 or	2	Chemistry 29b	2
Geology 6		Chemistry 25, † 4	2
Electrical Engineering 10a.	3	Elective	5
Electrical Engineering 11a, † 4	2		17
Elective	2		
	17		

The Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college course to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The attention of the student is directed to the fact that the scope of civil engineering is so broad that he may never expect to become expert in all of its branches, and that on the completion of his course he should obtain employment in that branch for which he seems best adapted.

It is impressed upon his mind that the granting of his bachelor's degree does not create him an engineer. It simply indicates that he has received the technical mental training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice and designing. Effort is made to acquaint the student with the best engineering practice, and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and from the engineering world. These lectures tend to increase the interest of the student, and to bring him in touch with men outside of his institution.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, instrument rooms, and a filing and reference room, and is well equipped with apparatus.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. In the spring semester of the third year the student is required to choose between two optional lines of study. Option 1 consists of work in Hydraulic Engineering, while Option 2 consists of work in Railroad Engineering. The time devoted to each option is the same. Owing to the available facilities of the department not more than sixty per cent of the number

of students in a class are allowed to select either option. A written statement is required from each student before the close of the fall semester giving his reasons for his selection. The head of the department reserves the right to make the final division.

The following subjects constitute the regular four years' curriculum. Certain general subjects which are given as requirements, may, on presentation of satisfactory reasons to the head of the department, be omitted and others substituted.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	1-2	Physical Training *2	1
	19 1-2		20

Sophomore Year

Civil Engineering 1a, 2a	2 1-2	Civil Engineering 2b, 2c	2
Drawing 3, *6	2	Civil Engineering 3a, 4a	3
English 1a[1]	1	Drawing 4, *6	2
Mathematics 7	5	English 1b[1]	1
Military 1, *3	1	Mathematics 8	5
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19 1-2	Physics 2	3
		Physics 5, *5	2
			21

JUNIOR YEAR

Civil Engineering 3b	1	Civil Engineering 6, *6....	2
Civil Engineering 4b, 4c, *6	2	Civil Engineering 9a.....	1
Civil Engineering 5	2	Civil Engineering 8 or Civil Engineering 19	2
Economics 1a	2		
Geology 6	2		
Mechanics 5	5	Civil Engineering 10.....	3
Mathematics 10	3	Civil Engineering 21	2
Physics 19	1	Economics 2a	2
† Physics 9	1	Mechanics 6	5
	19	Mechanical Engineering 25, †2	1
			18
		** Civil Engineering 9b....	2

SENIOR YEAR

Civil Engineering 12	3	Civil Engineering 13a.....	3
Civil Engineering 20	2	Civil Engineering 13b.....	2
Civil Engineering 14, †12..	6	Civil Engineering 15, †6...	3
Civil Engineering 16.... 2 Civil Engineering 11a, †4 2 or Civil Engineering 25a... 3 Civil Engineering 11b, †2 1	4	Civil Engineering 17 and Electrical Engineering 12b or Civil Engineering 24 and 25b	4
History 5	2	Civil Engineering 26, †2...	1
	17	Economics 6	3
			16

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

** Taken after Commencement.

† By special arrangement Physics 8, given in the spring semester, may be substituted for Physics 9.

The Electrical Engineering Curriculum

This curriculum is intended to provide a thorough preparation in the scientific principles involved in the practice of electrical engineering; to explain and illustrate the application of these principles to the design, construction, installation, and operation of apparatus with which the electrical engineer has to deal; and to give practice and experience in the care and running of the same. In addition to this purely electrical work the student takes up carpentry, forge work, machine work, mechanical drawing, mathematics, physics, mechanics, steam engineering, and other subjects allied to engineering work. The general courses, required or elective. include English language, logic, psychology, history, political economy, education, sociology, and constitutional law.

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible and consists essentially of a 20 kilowatt electrical substation converting from a three phase, 60 cycle, 115 volt alternating current system to direct current, by means of rotary converters and belted alternating current motors driving direct current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressure for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	1-2	Physical Training *2	1
	19 1-2		20

SOPHOMORE YEAR

Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1b, *4	1 1-2	Mechanical Engineering 2, *4	1 1-2
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	18 1-2	Physics 5, *5	2
			20 1-2

JUNIOR YEAR

Electrical Engineering 1a	2	Electrical Engineering 1b	3
Mechanical Engineering 5b, *4	1 1-2	Electrical Engineering 2b, †3	1 1-2
Civil engineering 1b and 2a	2 1-2	Mechanical Engineering 5b, *4	1 1-2
Mechanics 5	5	Mechanical Engineering 8	3
Physics 11, *7 1-2	3	Mechanical Engineering 10	2
Economics 1a	2	Mechanics 6	5
Economics 7a or History 5	2	Economics 2a	2
		Elective	2 1-2
	18		20 1-2

SENIOR YEAR

Electrical Engineering 3a	3	Electrical Engineering 3b	2
Electrical Engineering 4a	2	Electrical Engineering 5b	1 1-2
Electrical Engineering 5a, †4	2	Electrical Engineering 7b	2
Electrical Engineering 6a, †4	2	Electrical Engineering 6b, †4	2
Mechanical Engineering 26, †3	1 1-2	Electrical Engineering 8b, *4	1 1-2
Mechanical Engineering 11	3	Electrical Engineering 4b	1
Civil Engineering 23	2	Mechanical Engineering 19, *4	1 1-2
Civil Engineering 22	1	Economics 6	3
		Elective	3
	16 1-2		17 1-2

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

The Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all works involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manuafcture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power and equipment of railways, and similar work.

The Mechanical Engineering Curriculum is arranged to fit men as well as possible in four years' time to enter any of these lines of work. It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught mainly by recitation based upon a carefully chosen text, which is supplemented or brought down to date where necessary, by explanation or illustrative examples on the part of the instructor. Numerous problems are assigned for work outside the classroom to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation and testing of apparatus by direct contact with it. In the drawing rooms application of theories to work in design is taught together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice

in the electrical laboratory. Sufficient time is devoted to recitation and field work in surveying to give familiarity with instruments and methods. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

Of the one hundred and fifty term hours required for graduation thirty-three are devoted to instruction in English composition and literature, modern language, economics, business law, and history. Opportunity to take additional work along general lines is offered and recommended to those who can readily carry it.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	1-2	Physical Training *2	1
	19 1-2		20

Sophomore Year

Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1a, *6	2	Mechanical Engineering 2, *4	1 1-2
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19	Physics 2	3
		Physics 5, *5	2
			20 1-2

JUNIOR YEAR

Mechanical Engineering 24.	1	Mechanical Engineering 5a, *6	2
Mechanical Engineering 5a, *6	2	Mechanical Engineering 8..	3
Mechanical Engineering 9..	2	Mechanical Engineering 10.	2
Mechanical Engineering 3, *4	1 1-2	Mechanical Engineering 15a, †2	1
Civil Engineering 1b	2	Mechanical Engineering 19, *4	1 1-2
Civil Engineering 2a	1-2	Electrical Engineering 10...	2
Mechanics 5	5	Mechanics 6	5
Physics 9, *5	2	Economics 2a	2
Economics 1a	2		
	18		18 1-2

SENIOR YEAR

Mechanical Engineering 11.	3	Mechanical Engineering 7..	2
Mechanical Engineering 12, *6	2	Mechanical Engineering 15c, †4	2
Mechanical Engineering 15b, †2	1	Mechanical Engineering 16.	2
Mechanical Engineering 18, *6	2	Mechanical Engineering 17, *6	2
Civil Engineering 22	1	Mechanical Engineering 13.	2
Civil Engineering 23	2	Mechanical Engineering 20.	1
Electrical Engineering 10a..	2	Economics 6	3
Electrical Engineering 11a, †4	2	Electives	2
Elective	2	Electrical Engineering 10b..	1
	17		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

The Pharmacy Curriculum

The Department of Pharmacy comprises:
The Pharmacy Curriculum
The Short Curriculum in Pharmacy

This curriculum is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and a thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, as is offered in other college courses. Thirty credits are required for graduation.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this curriculum. The growing importance of the biological, sanitary, and medical sciences, and the pharmacist's relation to them, make it increasingly necessary to his success that he be not only a well trained man in the technical branches of his art, but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy and the best chemical and pharmaceutical journals.

College of Technology

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 3 and 3p	4	English 3 and 3p	4
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 4 and 2	5	Mathematics 2 and 1	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	1-2	Physical Training *2	1
	17 1-2		18

Sophomore Year

Biology 1	5	Biology 1	5
Chemistry 14, †8	4	Chemistry 7	5
English 1a[1]	1	English 1b[1]	1
Military 2, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	19		19

Junior Year

Biological Chemistry 1	5	Bacteriology 1, †6	3
Chemistry 8	3	Bacteriology 2	1
Chemistry 16, †10	5	Chemistry 19d, †4	2
Pharmacy 5	2	Chemistry 19f, †2	1
Plant Histology 10	4	Chemistry 31	2
Electives	1	Lab. Biol. Chem. 2, †6	3
		Pharmacy 6	4
	20	Electives	4
			20

SENIOR YEAR

Pharmacy 2	5	Pharmacy 4	5
Pharmacy 3, † 12	6	Pharmacy 9, † 3	1 1-2
Pharmacy 7	3	Pharmacy 10, † 10	5
Elective	4	Pharmacy 11	3
		Elective	4
	18		18 1-2

From courses in history, philosophy, and economics a total of at least five hours must be chosen.

The number of hours required and elected need not exceed 150, or 30 credits.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

The Short Curriculum in Pharmacy

This curriculum of two years, is designed for those who, for lack of time or for other reasons, are unable to take the curriculum of four years. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The curriculum corresponds, in general, to the usual full curriculum of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this curriculum does not warrant extending to other than advanced students the privilege of electives.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Botany 13	3
Chemistry 14, † 16	8	Chemistry 2	3
Pharmacy 1	5	Chemistry 7	5
Pharmacy 5	2	Chemistry 16, † 10	5
		Pharmacy 6	4
	17		20

SOPHOMORE YEAR

Chemistry 8	3	Bacteriology 1, † 6	3
Pharmaceut. Histol. 14	3	Chemistry 19f	1
Pharmacy 2	5	Chemistry 31	2
Pharmacy 3, † 12	6	Pharmacy 4	5
Pharmacy 7	3	Pharmacy 9, † 3	1 1-2
	20	Pharmacy 10, † 10	5
		Pharmacy 11	3
			20 1-2

Students who complete this curriculum in a satisfactory manner receive the degree of Pharmaceutical Chemist.

DEPARTMENTS OF INSTRUCTION

CHEMISTRY

Professor McKee; Associate Professor Easley; Mr. Burghart; Mr. Buswell; Mr. Whittier

1. General Chemistry.—This course deals with the general principles of the science. Lectures and recitations. *Two hours a week.* Fall semester.

2. General Chemistry.—This course is a continuation of course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds and chemical properties. Lectures and recitations. *Three hours a week.* Spring semester.

3. Laboratory Chemistry.—Laboratory work to accompany course 1. † *Four hours a week.* Fall semester.

4. Laboratory Chemistry.—A continuation of course 3 to accompany course 2. † *Four hours a week.* Spring semester.

6. Organic Chemistry.—An elementary course giving in one semester a rapid view of the subject. Students who have sufficient time available are advised to take courses 7 and 8 instead of this course. No prerequisite other than General Chemistry. *Three hours class room and* † *four hours laboratory work a week.* Spring semester.

7. Organic Chemistry.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory work. The text followed is Holleman's Text-book of Organic Chemistry. Holleman's Laboratory Manual is used for the experimental

work. *Three hours class room and † four hours laboratory work a week.* Spring semester.

8. Organic Chemistry.—A continuation of course 7. The work is chiefly in the aromatic series. *Three hours a week.* Fall semester.

9. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils and the common coals. † *Four hours a week.* Fall semester.

12. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. † *Six hours a week.* Fall semester.

13. Descriptive Mineralogy.—The text-book is Moses and Parson's Elements of Mineralogy. † *Three hours a week.* Spring semester.

14. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. † *Eight to † sixteen hours a week.* Fall semester.

15. Qualitative Analysis.—A continuation of course 14. † *Six hours a week.* Spring semester.

16. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Lincoln and Walton's Exercises in Elementary Quantitative Chemical Analysis. Open to students who have had course 14. † *Ten hours a week.* This course is offered each semester.

18. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravimetric and volumetric methods are used. Open to students who have taken course 16. † *Eight hours a week.* Fall semester.

19. Special Quantitative Methods.—Open to students who have completed course 16. (a) Water analysis. (b) Electroanalysis. (c) Assaying. (d) Special volumetric analysis. (e) Organic analysis. (f) Toxicology and urinalysis. Each subdivision ordinarily requires † *four hours a week.* Work under this course is offered each semester.

22. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than* † *ten hours a semester* for its completion. Spring semester.

23. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. *Three hours a week.* Fall semester.

24a. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. *Two hours a week.* Fall semester.

24b. Industrial Chemistry.—A continuation of course 24a. *Two hours a week.* Spring semester.

25. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed courses 16 and 18. † *Four hours a week.* Spring semester.

26. Physical-Chemical Methods.—The course will include, determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as the refractometer, polariscope, and spectroscope. † *Six hours a week.* Spring semester.

28. Dyeing.—The practical application of dyes to cotton, wool, and silk. † *Fifteen hours a week* for two weeks.

29a. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, properties and alloys of iron. *Two hours per week.* Fall semester.

29b. Metallurgy of the Metals other than Iron.—A course similar to 29a. The metals other than iron and steel are studied. *Two hours a week.* Spring semester.

31. Chemical Reactions.—Principles governing chemical reactions; their application to equations; oxidation and reduction. *Two hours a week.* Spring semester.

32a. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures and recitations. *Three hours a week.* Fall semester.

32b. Physical Chemistry.—A continuation of course 32a. *Two hours a week.* Spring semester.

33. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. *Two hours a week.* Fall semester.

Laboratory fees covering general chemicals, gas, etc., are as follows: Courses 3, 4, 14, 16 and 22: $5. Courses 6, 7, 12, 15 and 18: $3. Courses 9, 13, 25, 26, 28 and each part of 19: $2.

Broken apparatus and special chemicals are paid for at the chemical supply room by use of a "breakage card" obtained from the University Cashier. The portion of this card which has not been used will be redeemed at the end of the semester by the Cashier.

For courses in biological and agricultural chemistry see the description of courses given by the department of Biological and Agricultural Chemistry.

Summer Term

Professor McKee; Associate Professor Easley; Mr. Burghart

1. General Inorganic Chemistry.—A review of the classroom work of the freshman year. Experimental lectures and recitations. *Five times a week.*

2. Elementary Chemistry.—A modification of course 1 arranged for those students who wish to review elementary chemistry before taking the examination for entrance to the University.

3. Methods of Laboratory Manipulation.—† *Six hours a week.* Given in 1912 and alternate years.

4. Physical Chemistry.—Lectures on selected chapters of the subject touching upon the following phases: molecular structure, the mass law, the theories of solution and their applications, especially

along the line of electro-chemistry. *Five times a week.* Given in odd years. Offered in 1911.

5. Organic Chemistry.—An elementary course in the subject open to those who have had General Chemistry. *Five times a week.* Given in even years. Not offered in 1911.

6. Laboratory work in general chemistry and in analytic chemistry arranged according to the needs of those attending the summer term.

CIVIL ENGINEERING

Professor Boardman; Professor Brown; Assistant Professor Bean; Mr. Kaulfuss; Mr. Kittredge

1a. Plane Surveying.—A course on the general principles of plane surveying; instruments, their adjustments and uses; the variation of the magnetic needle, and the determination of the true north; direct leveling; land survey computations. The text-book used is Breed and Hosmer's The Principles and Practice of Surveying, Vol. I. *Three hours a week.* Last nine weeks. Fall semester.

1b. Plane Surveying.—A course similar to 1a, given to students in the mechanical and electrical engineering courses. *Two hours a week.* Fall semester.

2a. Field Work in Surveying.—The use of the chain, compass, transit, and level. This course is given before the student has received class room instruction, and is designed to make him familiar with the uses of the instruments, such as running lines, turning angles, reading verniers and rods, etc. **Six hours a week.* First nine weeks. Fall semester.

2b. Plotting.—This course consists chiefly of map drawing from field notes, by the different methods in common use. (Course 2a is prerequisite). **Four hours a week.* First twelve weeks. Spring semester.

2c. Field Work in Surveying.—A continuation of course 2a. This course consists of original surveys, problem work, adjustment of in-

struments, note keeping, etc. The text-book used is Pence and Ketchum's Surveying Manual. (Course 2a is prerequisite). * *Six hours a week.* Last six weeks. Spring semester.

3a. Railroad Curves.—The geometry of railroad curves, switches and turnouts. The text-book used is Allen's Railroad Curves and Earthwork, together with Field and Office Tables, by the same author. (Course 1a or 1b is prerequisite). *Three hours a week.* First twelve weeks. Spring semester.

3b. Earthwork.—Recitations and lectures on the various methods of setting slope stakes, and of calculating earthwork. (Course 3a is prerequisite). *One hour a week.* Fall semester.

4a. Railroad Field Work.—This course consists of practice in running in railroad curves and turnouts. A general application of the theories of course 3a. (Courses 2a and 3a are prerequisite. † *Six hours a week.* Last six weeks. Spring semester.

4b. Railroad Field Work.—The survey of a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. (Courses 2c, 3a & 4a or Courses 2c and 27 are prerequisite). * *Six hours a week.* First nine weeks. Fall semester.

4c. Railroad Office Work.—The office work of mapping the notes taken in course 4b, including the calculation of the earth work. (Courses 2b and 4b are prerequisite). * *Six hours a week.* Last nine weeks. Fall semester.

5. Highway Engineering.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. The construction and maintenance of the different pavements on city streets. Lectures and recitations. (Course 1a or 1b is prerequisite). *Two hours a week.* Fall semester.

6. Drawing.—This course includes topographical drawing, lettering and tracing; stereotomy, giving the application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, abutments, bridge piers, etc. * *Six hours a week.* Spring semester.

8. Sanitary Engineering.—Sewerage systems; drainage and sewerage of towns; sewage disposal; sewage treatment; water purification; sanitation and the public health. Required of students electing Option 1. (Course 1a or 1b is prerequisite). *Two hours a week.* Spring semester.

9a. Advanced Surveying.—This course consists of lectures and readings on the theory of base line measurement, triangulation, precise leveling, topographical surveying, and the use of the plane table, and is a preparation for course 9b. The text-book is Breed and Hosmer's The Principles and Practice of Surveying, Vol. II. (Course 4b is prerequisite). *One hour a week.* Spring semester.

9b. Advanced Surveying.—This course consists of the practical application in the field of the principles given in course 9a. The work is given during the two weeks following commencement, and counts as 2-5 credit. (Course 9a is prerequisite).

10. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observation; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. The text-book used is Russell's Hydraulics. *Three hours a week.* Spring semester.

11a. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter, and various forms of floats. Trips are made to the United States Geological Survey gaging station, located on the Penobscot River between Howland and West Enfield, where discharge measurements are made, where, at this time of year, a discharge of from 4,000 to 10,000 cubic feet per second is usually found. The data thus obtained is used together with that obtained from the Survey to plot the rating curve, etc. The measurements taken are reported to the Survey. The expenses of this course are paid by the students. Required of students taking Option 1. (Course 10 is prerequisite). † *Four hours a week.* Fall semester.

11b. Hydraulic Field Work.—A short course similar to course 11a. Required of students taking Option 2. (Course 10 is prerequisite). † *Two hours a week.* Fall semester.

12. Structures.—A continuation of course 21. The theory of stresses in framed structures, including the plate girder, bridge trusses,

and roof trusses; reinforced concrete; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.* Fall semester.

13a. Structures.—A continuation of course 12. This course includes a study of the higher types of structures. *Three hours a week.* Spring semester.

13b. Graphic Statics.—This course consists of class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by the graphical method. (Course 12 is prerequisite). *Two hours a week.* Spring semester.

14. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. (Course 21 is prerequisite). † *Twelve hours a week.* Fall semester.

15. Designing.—A continuation of course 14. (Course 12 is prerequisite). † *Six hours a week.* Spring semester.

16. Hydraulic Engineering.—Rainfall, evaporation, and stream flow. The development and utilization of water power. The development of the modern turbine. This course is given by lectures and recitations. Required of students electing Option 1. (Course 10 is prerequisite). *Two hours a week.* Fall semester.

17. Hydraulic Engineering.—A continuation of course 16. (Course 11a is prerequisite). *Two hours a week.* Spring semester.

19. Railroad Engineering.—Lectures and recitations on the methods and materials of railroad construction. Subgrade; roadbed; trestles; culverts; track; street crossings; yards and terminals, signals and interlocking; track work and maintenance. Required of students electing Option 2. (Courses 3b and 4b are prerequisite). *Two hours a week.* Spring semester.

20. Masonry Construction.—A course including the discussion of building stone, cements and their tests, mortar, concrete, piles, foundations, pneumatic caissons, open caissons, bridge piers, and abutments.

Lectures and recitations. The text-book used is Baker's Treatise on Masonry Construction. *Two hours a week.* Fall semester.

21. Structures.—The theory of the simple beam; loads, reactions; vertical shear; shear; bending moment; influence lines. The object of this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, different tables, and the slide rule. The text-book used is Grover and Boardman's Notes on Beams and Simple Framed Structures. *Two hours a week.* Spring semester.

22. Foundations.—Building stones; manufacture of cement; tests of cement. Mortar; concrete, both plain and reinforced. This is a course of lectures given to students in the mechanical and electrical engineering courses. *One hour a week.* Fall semester.

23. Hydraulics.—A short course which includes the main principles given in course 10. Given to students in the mechanical and electrical engineering courses. The text-book is the same as that used in course 10. *Two hours a week.* Fall semester.

24. Railroad Engineering.—A course in railroad design. A map reconnaissance for a railroad about twelve to fifteen miles in length is made, applying the theories of course 25a. The final line is located, profile made, grades established and drainage areas and culverts calculated. The rails, switch points, frogs and ties for a turnout are designed. A railroad yard layout is computed and plotted. Required of students electing Option 2. (Courses 4c and 25a are prerequisite). † *Six hours a week.* Spring semester.

25a. Railroad Engineering.—A course discussing the economies of railroad location and operation. The railroad corporation, its rights and limitations; traffic; operating expenses; the locomotive and its work; distance; curves; grades. Required of students electing Option 2. (Course 19 is prerequisite). *Three hours a week.* Fall semester.

25b. Railroad Engineering.—A course of lectures and recitations taking up the work of maintenance and betterments. Required of students electing Option 2. (Course 25a is prerequisite). *One hour a week.* Spring semester.

26. Cement Testing.—This course consists of laboratory work for the purpose of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is required of students in mechanical engineering in the fall semester and of students in civil engineering in the spring semester. (Course 20 is prerequisite for spring semester course). *The time varies.*

27. Simple Curves and Earthwork.—A lecture course on the theory and practice of simple railroad curves, and on the field and office practice of staking out and computing earthwork. Given to students outside of the department of civil engineering who desire to take courses 4b and 4c. (Courses 1a and 2a are prerequisite). *One hour a week.* Spring semester.

ELECTRICAL ENGINEERING

Professor Canong; Assistant Professor Childs; Mr. Cheswell

1a. Elements of Electrical Engineering.—This course traces the development of electrical engineering from the practical application of laws studied in physics. The work is taken up by lectures, text-books, and problems. Required of juniors in electrical engineering. *Two hours a week.* Fall semester.

1b. Elements of Electrical Engineering.—A continuation of course 1a, showing the application of fundamental principles to the construction of electrical machinery and to general engineering problems. Required of juniors in electrical engineering. *Three hours a week.* Spring semester.

2b. Laboratory Work.—Electrical measurements, and the operation and testing of direct current generators and motors. This course illustrates the practical application of the work given in courses 1a and 1b. Required of juniors in electrical engineering. The charge for this course is $2.00. † *Three hours a week.* Spring semester.

3a. Elements of Alternating Current Circuits.—A study of the conditions which arise in connection with the introduction of variable and alternating electric pressures and the production of such pressures,

measurements, and calculations for the same. Required of seniors in electrical engineering. *Three hours a week.* Fall semester.

3b. Alternating Current Machinery.—A continuation of course 3a, taking up the application of the fundamental elements of alternating currents to the design, construction, and operation of apparatus and machinery; the study of polyphase apparatus in the generation, transmission, distribution, and utilization of power. Required of seniors in electrical engineering. *Four hours a week for the first nine weeks.* Spring semester.

4a. Electrical Development.—A course on the design, construction, and cost of electro-magnets and clutches, electric heating apparatus, direct current generators and motors, and the general features of the design of alternating current machinery. The study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in electrical engineering. *Two hours a week.* Fall semester.

4b. Reference Work.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and presents the results of such investigation to the class. Also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in electrical engineering. *One hour a week.* Spring semester.

5a. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in course 4a. Calculations are made for electro-magnetic devices, and for direct current generators, involving a knowledge of the fundamental electrical principles of design, the principles of mechanical design, cost of materials and cost of labor, and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in electrical engineering. † *Four hours a week.* Fall semester.

5b. Design of Direct and Alternating Current Machinery.—A continuation of course 5a. Drawing room work. Required of seniors in electrical engineering. † *Four hours a week for thirteen weeks.* Spring semester.

6a. Laboratory Work.—A continuation of course 2b, taking up the testing of direct current apparatus and machinery, and alernating current measurements; investigation of power plant equipments and electric lighting. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

6b. Laboratory Work.—A course showing the practical application of the work done in courses 3a and 3b, and continuing the laboratory work of course 6a, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in electrical engineering. The charge for this course is $3.00. † *Four hours a week.* Spring semester.

7b. Electrical Engineering.—A course in general engineering applications and practical problems, such as will be met with after the student leaves college, applying all the work and training of the course and the technical ability of the student. Required of seniors in electrical engineering. *Four hours a week, second nine weeks.* Spring semester.

8b. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus, and development of original ideas of the student; also for testing, repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in electrical engineering. *Seventy-two hours during the senior year.*

9a. Thesis Work.—The designing of electrical apparatus or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in electrical engineering. *Fall semester and through the senior year, as arranged.*

10b. Electrical Development and Application.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of juniors in mechanical and chemical engineering. *Two hours a week.* Spring semester.

10a. Alternating Current Development and Application.—A required course for seniors in mechanical and chemical engineering which continues the work taken up in course 10b. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from the operating engineer's point of view. *Two hours a week.* Fall semester.

11a. Laboratory Work.—For mechanical and chemical engineers. Electrical measurements, and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in courses 10b and 10a, and the work is arranged for the particular needs of the mechanical engineer. This course is open to civil engineering students who have previously elected one of the preliminary electrical courses. This course may be followed by the regular courses 6a and 6b, by those wishing to become familiar with alternating current machinery. Required of seniors in mechanical and chemical engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

12b. Electrical Transmission and Distribution of Power.—A required course for seniors in option I in civil engineering, taking up the elements of electrical measurements, the generation, transmission, and utilization of power, covering the electrical feature of water power development. *Two hours a week.* Spring semester.

13b. Electric Railway Engineering.—A study of the preliminary steps taken in electric railway engineering. The selection of the proper motor equipment for a given class of service. Car, bond, and transmission testing. An elective course open to seniors in electrical engineering. *Two hours a week.* Spring semester.

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences.

MECHANICAL ENGINEERING

Professor Jewett; Assistant Professor Herschel; Mr. Davee; Mr. Carter; Mr. Lekberg; Mr. Blaisdell

1a. Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern

woodworking practice, and also teach him to work from dimensioned drawings. These exercises lead up to pattern-making. The pattern work consists of making complete patterns and core boxes from drawings. Required of students in mechanical engineering. Charge for materials, $4.00. * *Six hours a week.* Fall semester.

1b. Woodworking.—A shorter course than 1a, arranged for students in electrical engineering. Required. Charge for materials, $4.00. * *Four hours a week.* Fall semester.

2. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in mechanical and electrical engineering. Charge for material, $5.00. * *Four hours a week.* Spring semester.

3. Kinematical Drawing.—This course supplements 4. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in mechanical engineering. * *Four hours a week.* Fall semester.

4. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. The text-book is Schwamb and Merrill's Elements of Mechanism. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

5a. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Required of students in mechanical engineering. Charge for materials, $5.00. * *Six hours a week.* Fall and spring semesters.

5b. Machine Work.—A shorter course than 5a and 5b, required of students in electrical engineering. Charge for material $5.00. * *Four hours a week.* Fall and spring semester.

6. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with course 5, ten per cent. of the hours registered for under course 5 being applied to foundry work.

7. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanisms. The Zeuner, Bilgram, and other valve-diagrams are made use of in this connection. Practical problems are solved in the drawing room. Required of students in mechanical engineering. *Two hours a week.* Spring semester.

8. Machine Design.—A study of the designing of machines, proportioning of parts for strength and rigidity, etc. Required of students in mechanical and electrical engineering. *Three hours a week.* Spring semester.

9. Materials of Engineering.—Properties of the metals, timber, rope, etc. Protective coatings and preservatives. Required of students in mechanical engineering. *Two hours a week.* Fall semester.

10. Steam Engineering.—Deals with the fundamental theories of gases and steam, illustrated by problems of practical form. The laws of thermodynamics; laws of gases; characteristic equations for gases; kinds of expansion and compression; Carnot's cycle; heat quantities in steam; use of the steam tables; steam equations; quality of steam; calorimeters; entropy. Required of students in mechanical and electrical engineering. *Two hours a week.* Spring semester.

11. Steam Engineering.—Types and details of steam boilers, engines, and auxiliary machinery. A consideration of fuels and the chemistry of combustion; efficiency factors of the steam boiler plant. Heat losses in steam engines; compound steam engines; refrigeration; gas engine cycles and gas producer principles. For electrical engineers, valve gears is included. Required of students in mechanical and electrical engineering. (Course 10 is a prerequisite). *Three hours a week.* Fall semester.

12. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room. Required of students in mechanical engineering. **Six hours a week.* Fall semester.

13. Hydraulic Machinery.—A study of the various forms of machinery used with hydraulic power, either in its development or its application. Required of students in mechanical engineering. Civil

Engineering 23 is a prerequisite for this course. *Two hours a week.* Spring semester.

15a. Mechanical Laboratory.—The calibration of instruments used in engineering testing followed by the more elementary experimental work. Required of juniors in mechanical engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

15b. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, valve settings, etc. Required of seniors in mechanical engineering. The charge for the course is $3.00. † *Two hours a week.* Fall semester.

15c. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in mechanical engineering. The charge for the course is $3.00. † *Four hours a week.* Spring semester.

16. Steam Engineering.—A continuation of courses 10 and 11, dealing with steam engines, steam turbines, air compressors, refrigerating machines, and gas engines. Considerations affecting the design and efficiency of operation of heat motors, and the lay-out of power plants. Required of students in mechanical engineering. *Two hours a week.* Spring semester.

17. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general machine design. A steam engine is partially designed in the drawing room. Required of students in mechanical engineering. * *Six hours a week.* Spring semester.

18. Machine Design.—A continuation of course 8, including the execution of the design of some typical machines. Required of students in mechanical engineering. * *Six hours a week.* Fall semester.

19. Machine Drawing.—Instruction in modern drafting-room methods, shop terms, etc. The practical application of drawing to use in the construction of machines. Required of students in mechanical engineering. * *Four hours a week.* Spring semester.

20. Heating and Ventilation.—A lecture course. Required of students in mechanical engineering. *One hour a week.* Spring semester.

21. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.* Fall and spring semesters.

22. Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

24. Mechanism of Machines.—Lectures supplementing course 4. Required of students in mechanical engineering. *One hour a week.* Fall semester.

25. Strength of Materials by Test.—A course in the mechanical laboratory for students in civil engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

26. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the student in electrical engineering. Required. The charge for the course is $2.00. † *Three hours a week.* Fall semester.

MECHANICS AND DRAWING

Professor Weston; Assistant Professor Grover; Mr. Farnham

1. Drawing.—Instruction and practice in technical freehand drawing and lettering, in the care of drawing instruments and their use in elementary problems involving right lines, circles, conic sections and orthographic projections. * *Six hours a week.* Fall semester.

2. Drawing.—A continued study of the methods of orthographic projection, isometric projection, oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. * *Six hours a week.* Spring semester.

3. Drawing.—The elementary principles and problems of descriptive geometry including intersections and developments. * *Six hours a week.* Fall semester.

4. Drawing.—A continued study of the making of working drawings of simple machines together with instruction and practice in making

titles for the same. This is followed by several weeks work in linear perspective and line shading. * *Six hours a week.* Spring semester.

5. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curve; torsional stresses and theories of stress in long columns. *Five hours a week.* Fall semester.

6. Mechanics.—A continuation of course 5. *Five hours a week.* Spring semester.

7. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function, with applications to problems in gravitation, hydromechanics, etc. *Two hours a week.* Fall semester.

8. Advanced Mechanics.—A continuation of course 7. *Three hours a week.* Spring semester.

10. Drawing.—A course designed specially for students in agriculture and non-engineers. It combines the fundamental principles of Drawing 1, and Drawing 2. * *Six hours a week.* Fall semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 199.

PHARMACY

Professor Jackman

1. Pharmaceutical Chemistry.—Chemical formulæ; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. The text-book is Prescott and Johnson's Qualitative Chemical Analysis. *Five hours a week.* Fall semester.

2. Pharmacy.—Pharmacopœias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; pharmaceutical

arithmetic and problems; the chemical elements, official salts, their preparations; organic compounds, their official preparations; official drugs, their preparations; animal preparations; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall semester.

3. Laboratory Pharmacy.—Official and National Formulary preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, and other galenicals; official tests of chemicals, drugs, and preparations for identity, strength and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. † *Twelve hours a week.* Fall semester.

4. Pharmacopœia.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring semester.

5. Inorganic Pharmacognosy.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall semester.

6. Organic Pharmacognosy.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Culbreth's Materia Medica. *Four hours a week.* Spring semester.

7. Materia Medica.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall semester.

9. Pharmacy Readings.—Current pharmacy literature; research and reference readings; abstracting; reports. † *Three hours a week.* Spring semester.

10. Laboratory Pharmacy.—A continuation of course 3. † *Ten hours a week.* Spring semester.

11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to principles and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compound-

ing, etc. The text-book is Ruddiman's Incompatibilities in Prescriptions. *Three hours a week.* Spring semester.

PHYSICAL TRAINING

The courses in this department are described on page 200.

PHYSICS

The courses in this department are described under the College of Arts and Sciences.

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all students with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

PROFESSOR VARNUM

1. MILITARY, FIRST YEAR'S COURSE.

(a) PRACTICAL:

1—U. S. Infantry Drill Regulations, to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.
2—Infantry Target Practice.
3—Field Service Regulations.
4—Guard Duty.

(b) THEORETICAL:

1—U. S. Infantry Drill Regulations, to include the School of the Company.
2—Manual of Guard Duty.
3—Field Service Regulations.
4—Small Arms Firing Regulations.

Required of all students, with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the freshman year, counting one-fifth credit.*

2. MILITARY, SECOND YEAR'S COURSE.

(a) PRACTICAL:

The same as course 1 (a).

(b) THEORETICAL:

1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies.

2—Records and Official Papers.

3—Small Arms Firing Regulations.

4—Field Service Regulations.

Required of all students, with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the sophomore year, counting one-fifth credit.*

3. MILITARY, THIRD YEAR'S COURSE.

(a) PRACTICAL:

Duties consistent with rank in carrying out (a) in courses 1 and 2.

(b) THEORETICAL:

Assistant instructors over those taking course 1 (b).

Open to all who have completed course 2. *Three hours, or the equivalent, a week, counting one-fifth credit.*

4. MILITARY, FOURTH YEAR'S COURSE.

(a) PRACTICAL:

The same as for course 3 (a).

(b) THEORETICAL:

Assistant instructors over those taking course 2 (b).

Open to all who have completed course 3. *Three hours or the equivalent, a week, counting one-fifth credit.*

PHYSICAL TRAINING

DIRECTOR WINGARD

1. PHYSICAL TRAINING.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movements; elementary dumbbell, wand, and apparatus exercises. *One hour lecture and two hours practice.* Fall semester.

2. PHYSICAL TRAINING.—Intermediate and advanced class exercises and combination apparatus work. *One hour lecture and two hours practice.* Spring semester.

THE MAINE AGRICULTURAL EXPERIMENT STATION

THE STATION STAFF

CHARLES DAYTON WOODS, Sc. D.	*Director*
JAMES MONROE BARTLETT, M. S.	*Chemist*
WARNER JACKSON MORSE, M. S.	*Plant Pathologist*
RAYMOND PEARL, Ph. D.	*Biologist*
OSKAR AUGUSTUS JOHANNSEN, Ph. D.	*Entomologist*
EDITH MARION PATCH, Ph. D.	*Associate Entomologist*
HERMAN HERBERT HANSON, M. S.	*Associate Chemist*
CHARLES EDWARD LEWIS, Ph. D.	*Associate Plant Pathologist*
WALTER WEIDENFELD BONNS, B. S.	*Associate Horticulturist*
EUGENE PETER HUMBERT, Ph. D.	*Associate Biologist*
MAYNE ROSE CURTIS, M. A.	*Assistant Biologist*
ALBERT GUY DURGIN, M. S.	*Assistant Chemist*
ALVIN KIMBALL BURKE, B. S.	*Assistant Chemist*
ROYDEN LINDSAY HAMMOND	*Seed Analyst and Photographer*
ELMER ROBERT TOBIE, B. S.	*Inspector*
ALBERT VERRILL, B. S.	*Inspector*
EDGAR ALBERT WHITE	*Inspector*
BLANCHE FOLSOM POOLER	*Clerk and Stenographer*

ESTABLISHMENT OF THE STATION

The Maine Fertilizer Control and Agricultural Experiment Station, established by Act of the Legislature approved March 3, 1885, began its work in April of that year in quarters furnished by the College. After the Station had existed for two years, Congress passed what is known as the Hatch Act, establishing agricultural experiment stations in every state. This grant was accepted by the Maine Legislature by an Act approved March 16, 1887, which established the Maine Agricultural Experiment Station as a department of the University. The reorganization was effected in June, 1887, but work was not begun until February 16, 1888. In 1906 Congress passed the Adams Act for the further endowment of the stations established under the Hatch Act.

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 8) composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, and the State Dairyman's Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station, and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1909-1910 is about $51,500; $15,000 of which comes from the Hatch fund; $15,000 from the Adams fund; $15,000 from State appropriations and fees from feeding stuff inspection, fertilizer inspection, food and drug inspection, fungicide and insecticide inspection, and seed inspection; $4,500 from State appropriation for printing; $1,000 from the United States Department of Agriculture for carrying on coöperative experiments with poultry; and about $1,000 from miscellaneous sources.

THE OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Experiment Station can undertake from the Adams Act fund is more restricted and can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 21. The Station is well equipped in laboratories and apparatus, particularly in the lines of chemical, entomological, horticultural, pomological, vegetable pathological, and poultry investigations. Its poultry plant is probably the most complete of that of any experiment station in the country. It has extensive collections illustrating the botany and entomology of the state. It has a library of about 3,000 volumes, chiefly agricultural and biological journals, and publications of the various experiment stations.

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn and other farm crops." The farm is situated in the

counties of Kennebec and Androscoggin and largely in the town of Monmouth. It is on the Farmington Branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor," is on the farm.

The farm contains 225 acres, about 200 of which are in orchards, fields and pastures. There are in the neighborhood of 3,000 apple trees upon the place which have been set from 10 to 20 years. Fields that are not in orchards are well adapted to experiments with corn, potatoes, and similar general farm crops. The house is two-story with a large wing and contains about 15 rooms. It is well arranged for the Experiment Station offices and for the home of the farm superintendent. The barn is large, affording storage for hay and grain. The basement, which was formerly used for cattle, offers storage for apples, potatoes and roots.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, orchard and field experiments, poultry investigations, and entomological research. Some of these are in cooperation with bureaus of the United States Department of Agriculture.

INSPECTIONS

The inspection of agricultural seeds, the inspection of concentrated feeding stuffs, the inspection of food and drugs, the inspection of fungicides and insecticides, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters. The cost of the inspections is borne by a state approriation, and by fees.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are printed as Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together

make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent to farmers whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars and similar fleeting publications. From 20 to 30 are published each year and are sent to different addresses according to the nature of the subject matter.

On request the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

THE SUMMER TERM

The summer term of the University of Maine is not a summer school, but so far as practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the college entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. College students who may wish to anticipate work in their course, or who may have work in arrears. A student should be able to make one credit (the equivalent of a five hours' subject for eighteen weeks) during the summer term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the university books.

Courses of Study

During the summer of 1911 courses were offered in the following subjects: Agriculture, Botany, Chemistry, Domestic Science, Education, English, French, German, History, Horticulture, Latin, Mathematics, and Physics. These courses are described in connection with the courses offered at the University during the remainder of the year.

Lectures 1911.

Professor G. D. Chase,	Names
Doctor J. C. Hockenberry,	A New Experiment in Education
Professor W. P. Daggett	Reading of Old Heidelberg
Professor L. E. Woodman,	An Experimental Lecture in Physics
M. and Mme. E. L. Raiche,	Reading of Perrichon
President R. J. Aley,	The Recent Meeting of the National Education Association

Vesper Services

A brief religious service is conducted each Sunday afternoon at 4.00 P. M. in the Library. This consists of a song service and a brief address.

Library

Throughout the summer term the university library of 45,000 volumes and the reading room, containing about three hundred periodicals and the Maine daily papers, is open from 9.00 A. M. to 12 M., and from 2.00 to 5.00 P. M. daily, except Saturday afternoon and Sunday.

The library privileges ordinarily accorded to university students, including the home use of books, are extended to students in the summer courses.

Laboratories, Museums, and Observatory

The laboratories belonging to the departments of physics, chemistry, and botany are available for use of the students. In the physical and chemical laboratories there is ample provision for carrying on the various courses from the preparatory work to that of the graduate student in the University.

The botanical laboratory is in charge of the professor of biology. The student is furnished with microscope, specimens, and preparations for advanced work.

The fees for these courses may be found on page—

The museum is illustrative of the rocks and fauna of Maine, and is open at stated periods for the use of the students.

The observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The work of the observatory is explained by Professor Hart in evening lectures.

Teachers' Agency

The authorities of the Summer Term have made arrangements with a Teachers' Agency whereby the students in attendance may secure the

benefits of the agency without paying the usual registration fee. Frequent calls are received each year for teachers, the demand greatly exceeding the supply. Every effort will be made to secure satisfactory positions for properly qualified teachers.

Expenses

Tuition for the term of six weeks, covering all charges for instruction for a registration of fifteen hours a week, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

For residents of Maine, $12.00.

For residents of other states, $18.00.

Board and room in the university buildings, including light and the necessary furniture, $30.00 for the term. The charge for room alone is $1.00 per week, and for board alone $4.00 per week. Men should bring sheets, pillow cases, and towels.

Recreation

Most of the class work is held during the forenoon, leaving the afternoon and evening free for study and recreation.

On the campus are several excellent tennis courts. The neighboring country affords many attractive excursions, on foot, by bicycle, carriage, or electric cars. Maine's famous seaside resort, Bar Harbor, is but one and one-half hours distant by rail, while Mount Kineo and Moosehead Lake are at only a slightly greater distance and easily accessible.

Within easy riding or wheeling distance are Lakes Pushaw and Chemo, as well as several attractive mountains.

In General

Prospective students are invited to consult the president, or any of the instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privileges.

If there should be a considerable demand for other studies than those named, arrangements will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1911. Unimportant changes are likely to be made for the coming term.

ALUMNI ASSOCIATIONS

These associations have been organized for the purpose of extending the influence of the University, and keeping alive its spirit in various sections of the country. They have rendered efficient service in promoting the interests of the University.

THE GENERAL ASSOCIATION

President, C. W. Mullen, '83, Bangor
Vice-President, E. F. Hitchings, '75, Orono
Recording Secretary, F. L. Russell, '85, Orono
Corresponding Secretary, R. K. Jones, '86, Orono
Treasurer, J. A. Gannett, '08, Orono
Necrologist, J. N. Hart, '85, Orono

ADVISORY COUNCIL

MEMBERS AT LARGE

Albert H. Brown, B. S. 1880, Old Town, Maine	1912
George H. Hamlin, C. E., 1873, Orono, Maine	1912
Louis C. Southard, M. S., LL. D., 1875, Boston, Mass	1913
Charles E. Oak, M. E., 1876, Bangor, Maine	1913
Perley B. Palmer, B. C. E., 1896, Orono, Maine	1914
Jeremiah S. Ferguson, M. S., M. D., 1889, New York City	1914
Charles S. Bickford, B. S., 1882, Belfast, Maine	1915
George E. Thompson, B. C. E., 1891, Bangor, Maine	1915
Edward H. Kelley, B. S., 1890, Bangor Maine	1916
C. Parker Crowell, B. M. E., 1898, Bangor, Maine	1916

Representing the College of Agriculture

Whitman H. Jordan, Sc. D., LL. D., 1875, Geneva, N. Y.	1915

Representing the College of Arts and Sciences

DeForest H. Perkins, M. A., LL. B., 1900, Portland, Maine..... 1912

Representing the College of Law

Frank D. Fenderson, LL. B., 1899 Law, Limerick, Maine..... 1916

Representing the College of Technology

George F. Black, C. E., 1886, Portland, Maine..... 1913

THE WEST MAINE ASSOCIATION

President, S. W. Bates, '75, Portland
Secretary and Treasurer, S. E. Patrick, '03, Gorham

THE BOSTON ASSOCIATION

President, S. P. Graves, '03, 30 Court St., Boston, Mass.
Vice-President, F. O. Stevens, '06, 975 Commercial St., East Weymouth, Mass.
Secretary and Treasurer, H. E. Statton, '09, 319 Washington St., Boston, Mass.

THE NEW YORK ASSOCIATION

President, L. W. Riggs, '85, Cumberland, Maine
Vice-President, C. P. Gray, '00, 29 West 46th St., New York City
Secretary and Treasurer, A. W. Stephens, '99, 8 Birchwood Ave., East Orange, N. J.

THE WESTERN ASSOCIATION

President, Wallace E. Belcher, '99, 202 So. La Salle St., Chicago, Ill.
Vice-President, Carlos Dorticos, '03, 1038 Monadnock Block, Chicago, Ill.
Secretary and Treasurer, Arnold W. Totman, '07, care University Club, Chicago, Ill.
Executive Committee, William Webber, '84, J. A. McDermont, '05, C. C. Whittier, '99, M. C. Wiley, '03, F. L. Douglass, '03

THE WASHINGTON (D. C.) ASSOCIATION

President, P. L. Ricker, '00, U. S. Dept. Ag.
Secretary and Treasurer, H. P. Gould, '93, U. S. Dept. Ag.

Alumni Associations

The Penobscot Association

President, W. B. Pierce, '90, Bangor
Vice-President, Dr. W. A. Bumps, '75, Dexter
Secretary and Treasurer, J. H. McClure, '05, Bangor
Executive Committee, V. K. Gould, '97, H. B. Buck, '93,
H. S. Boardman, '95

The Pittsburg Association

President, A. G. Mitchell, '75, Pittsburg, Pa.
Vice-President, H. G. Hosmer, '07, Pittsburg, Pa.
Secretary and Treasurer, B. F. Faunce, '01, Pittsburg, Pa.
Executive Committee, C. D. Smith, '05, H. E. Cole, '02, J. G. Scales, '10

The Schenectady Association

President, J. G. Lurvey, '00, 1206 State St.
Vice-President, C. N. Rackliffe, '02, 1206 State St.
Secretary, H. E. Duren, '02, 306 Lafayette St.
Treasurer, H. F. Hoxie, '99, 940 State St.
Executive Committee, C. W. Bartlett, '01, H. P. Mayo, '99,
H. E. Duren, '02

The Kennebec Valley Association

President, Harold E. Cook, '00, Waterville
Secretary, Ernest C. Butler, '01, Skowhegan
Treasurer, Samuel J. Foster, '03, Oakland
Executive Committee, J. H. Burleigh, '87, E. C. Butler, '01,
H. E. Cook, '00

The College of Law Alumni Association

President, F. D. Fenderson, '99, Limerick
Vice-President, Freeland Jones, '00, Bangor
Corresponding Secretary, G. H. Worster, '05, Bangor
Financial Secretary, N. V. MacLean, '05, Bangor
Treasurer, B. W. Blanchard, '04, Bangor

COMMENCEMENT

The Commencement Exercises of 1911 were as follows:

Saturday, June 10: Phi Kappa Phi Initiation and Banquet, 7.00 P. M.

Sunday, June 11: Baccalaureate Address by President Robert Judson Aley, LL. D., of Orono.

Monday, June 12: Class Day Exercises; President's Reception.

Tuesday, June 13: Commencement Dinner; Meeting of Law Alumni; Fraternity Receptions; Alumni Lunch; Alumnæ Lunch; Meeting of the General Alumni Association; Fraternity Reunions.

Wednesday, June 14: Commencement Address, by President David Nelson Beach, D. D., of Bangor; Announcement of Honors; Conferring of Degrees; Commencement Ball.

DEGREES CONFERRED

COLLEGE OF AGRICULTURE

Bachelor of Science in Agriculture

Charles Calvin Cleveland.....Skowhegan
George Haley .....Brownville
Russell Smith .....Auburn
George Jacob Wentworth .....Kennebunk Beach

Bachelor of Science in Forestry

George Dunham Bearce .....Auburn
John Nelson Jewett .....Cherryfield
Wentworth Peckham .....Lewiston
Niles Cassius Pinkham .....Portland
Harold Grinnell Wood .....Hallowell

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts in Economics

Raymond Webber Davis ..... Guilford
Everett Heseltine Maxcy ..... Gardiner
Herbert Wilfred Pickup ..... Ipswich, Mass.
Nelson Ned Scales ..... Guilford
Sumner Waite ..... Portland

Bachelor of Arts in English

Louise Frances Hall ..... Belfast
Margaret Ellen McManus ..... Bangor
Hayward Stanley Thomas ..... Milo

Bachelor of Arts in German

Charles Harold Grant ..... Bangor
Mildred Louise Prentiss ..... Brewer

Bachelor of Arts in History

Florence Evelyn Brown ..... Old Town
Irene Cousins ..... Old Town
Benjamin Otis Warren ..... Fryeburg

Bachelor of Arts in Latin

Letitia Elizabeth Day ..... Brewer
Annie Hoadley Gilbert ..... Old Orchard

Bachelor of Arts in Mathematics

Florence Anna Taylor ..... Hermon

Bachelor of Arts in Physics

Ralph Maynard Holmes ..... Ellsworth
George Everett LaMarche ..... Hartford, Conn.

Bachelor of Arts in Romance Languages

Chester Squire Phinney ..... Pawtucket, R. I.

Bachelor of Science in Biology

George Clark Leavitt ..... Norway
Horace Newton Lee ..... Greenwood, Mass.

Bachelor of Science in Economics

James Leigh Dinsmore ..... Hallowell
Bert Christian Markle ..... Northampton, Mass.

Bachelor of Science in Mathematics

Alfred Sanford Adams ..... Newport

COLLEGE OF LAW

Bachelor of Laws

Albert Beliveau ..... Rumford
William Bradley Blaisdell ..... North Sullivan
Collen Carroll Campbell ..... Provincetown, Mass.
Rodney Walker Carter ..... Bluehill
Franklin Russell Chesley ..... Saco
Wilfred Grindle Conary ..... Bluehill Falls
George Leroy Connors ..... North Attleboro, Mass.
James Albert Connors ..... Boston, Mass.
Daniel Israel Gould ..... Bangor
Brad Dudley Harvey ..... Haverhill, Mass.
Charles Bridgham Hosmer ..... Hudson, Mass.
John Edmund Liggett ..... Augusta
John Bernard Madore, B. A. (Van Buren College, 1908) .... Van Buren
Wilbur Frances Merrill ..... Wiscasset
William Daniel Owens ..... Lynn, Mass.
Aaron Albert Putnam, B. A. (Bowdoin College, 1908) ..... Houlton
William Henry Sweeny ..... Worcester, Mass.
George Roy Sweetser, B. A. (University of Maine, 1909) ..... Bangor
Jacob Kevork Tertzag, B. A. (Euphrates College, 1902),
Mamouret-ul-Aziz, Armenia
Henry Harrison Varney ..... East Rochester, N. H.

COLLEGE OF TECHNOLOGY

Bachelor of Science in Chemical Engineering

William Edgar Bartow ..... Utica, N. Y.
Arthur Clement Eaton ..... Wenham, Mass.
William Oleson Haskell ..... Westbrook
Fred Warner Nason ..... Haverhill, Mass.
Clifford Patch ..... Bangor

Albert Verrill.....Westbrook
Earle Ovando Whittier.....Farmington

Bachelor of Science in Chemistry

Albert Davis Conley.....Woodfords
Louis Duncan Tallman Geery.....Katahdin Iron Works
Freeland John Morrison.....Bangor

Bachelor of Science in Civil Engineering

Eben Robert Barton.....Palmer, Mass
Alfred Michel Blanchard.....Southbridge, Mass.
Raymond Wilbur Buck.....Monticello
Harold Brainerd Burgess.....Rockland
Parker Messer Cooper.....Jefferson
William Parsons Cushman.....West Pownal
Raymond Earle Davis.....Orono
Frank Holliday Derby.....Orono
Olaf Windsor Dwinal.....Auburn
LeRoy Allan Fitch.....East Sebago
Charles Samuel Gerrish.....Kittery Point
Dunton Hamlin.....Orono
Ashton Halsted Hart.....Presque Isle
William Hilton.....Greenville
Harry Homans.....North Vassalboro
Irvin Frothingham Hooper.....Lynn, Mass.
George Henry Howe, Jr.....Caribou
Harold William Ingham.....Haverhill, Mass.
Sidney Morrison Jones.....Bangor
Arthur Joseph Leary.....Somersworth, N. H.
George Lester Lord.....South Berwick
Cecil Leland Lycette.....Houlton
Edwin Clayton Maxwell.....Palmer, Mass.
James Raymond Merrell.....North Adams, Mass.
Donald Prescott Oak.....Bangor
Ralph Edwin Patterson.....Bangor
Dana Newton Peaslee.....Lynn, Mass.
George Alfred Phillips.....Westbrook
Charles Drummond Rea.....Southwest Harbor
Harl Lowell Russell.....Dexter
Harold Rodolph Sargent.....Sedgwick

Frank Sleeper Sawyer.....Sabbattus
Philip Stanwood Strout.....South Portland
Merton Rogers Sumner.....South Paris
Benjamin Burbank Whitney.....Strong
Winthrop Field Wilson.....Portland

Bachelor of Science in Electrical Engineering

Albert Samuel Atwood.....Phillips
Guy Marble Blaisdell.....Farmington
Frederick Lincoln Chenery, Jr.....Wayne
Ralph Roscoe Day.....Cornish
Jasper Willard Everett.....Norway
Delton Wharff Folley.....Sangerville
George Washington Gifford.....Dennysville
Alexander Willard Goodwin.....Vanceboro
Ralph Harrison Greenwood.....Presque Isle
Hiram Elmer Harris.....West Minot
Roy Chandler Jones.....Gardiner
Lewis Albert Keen.....South Paris
James Putnam King.....Peabody, Mass.
Ernest Roy Kingsley.....Yarmouthville
LeRoy Morse LeBaron.....West Wareham, Mass.
Dimon Emery Merrill.....Alfred
Cyrus William Murphy, Jr.....West Kennebunk
John Tyler Robinson.....Sherman Station
Elmer Allen Sisson.....South Middleboro, Mass.
Nelson Ernest Smith.....Peabody, Mass.
Harry Whitman Vickery.....East Auburn

Bachelor of Science in Mechanical Engineering

Albert Holt Blaisdell.....Bangor
George Bunker Chapman.....Holyoke, Mass.
Samuel Wadsworth Clemons.....Hiram
Avery Carleton Hammond.....Orono
William Warren Hatch.....Brooklyn, N. Y.
George King Jordan.....Westbrook
Charles Joseph Pinkham.....Farmington
Philip Perry Sawtelle.....Augusta
Charles Edwin Stickney.....Portland
George Newton Varney.....East Rochester, N. H.

Ernest Thaxter Walker.....Biddeford
John Newton Warren.....Orono

Pharmaceutical Chemist

Harold Webster Bowdoin.....Kennebunk
Russell Carlton Butts.....Kingfield
Ellwyn Mortimer Fulton.....Blaine
Carlton Hutchins.....Kingfield
Clayton Harvey Steele.....West Jonesport

Bachelor of Science in Pharmacy

Elmer Robert Tobey.....Norridgewock

ADVANCED DEGREES

Honorary

Charles Lothrop Parsons, Sc. D.....Durham, N. H.

IN COURSE

Master of Science in Agriculture

Frederick Charles Bradford, B. S. (Harvard University, 1908)..Orono

Master of Arts in Chemistry

Lloyd Meeks Burghart, B. A. (Lake Forest College, 1906).....Orono

Master of Arts in English

Addison Benjamin Lorimer, B. A. (Colby College, 1888).....Bangor

Master of Science in Chemistry

Bertrand French Brann, B. S. (University of Maine, 1909).....Bangor
Edward Henry Smith, B. S. (University of Maine, 1900)
Attleboro, Mass.

Master of Science in Mathematics

Charles Liguori Craham, B. S. (University of Maine, 1910)
Brooklyn, N. Y.
Gladys Emma Kavanah, B. S. (University of Maine, 1910).....Bangor
Walter Edmund Wilbur, B. S. (University of Maine, 1908)..Pembroke

Master of Laws

Astor Elmassian, LL. B. (University of Maine, 1910)....Lynn, Mass.

PROFESSIONAL DEGREES

Civil Engineer

Curtis Eames Abbott, B. S. (University of Maine, 1905)....Chicago, Ill.
Elmer Guy Hooper, B. S. (University of Maine, 1907)...St. Louis, Mo.
Heber Penn Purington, B. S. (University of Maine, 1907)..Manila, P. I.
Robert Kent Steward, B. S. (University of Maine, 1908)....Urbana, Ill.

Certificates in the School Course in Agriculture

Earle Harlow Beckler.....Livermore Falls
John Dean.....Biddeford
Alfred Camden Hall.....Biddeford
Maurice Arland Peabody.....Exeter
Perley Louville Pingree.....Denmark
Seavey Allan Piper.....Troy
Harry Bradford Wadsworth.....Cornish
Melvin Foster Wilbur.....Pembroke

Certificate in the Teacher's Course in Agriculture

Ralph Pike Mitchell.....West Newfield

PRIZES AWARDED

Kidder Scholarship, Richard Anderson Power, Portland.

Western Alumni Association Scholarship, Erlon Victor Crimmin, Winterport.

Junior Exhibition Prize, Philip Garland, Old Town.

Sophomore Declamation Prize, Forest Bertram Ames, Bangor.

Franklin Danforth Prize, Russell Smith, Auburn.

Pittsburg Alumni Association Scholarship, Maynard Sumner Gould, Camden.

Kennebec County Prize, Nelson Ernest Smith, Peabody, Mass.

Walter Balentine Prize, Luther Sampson Russell, Orono.

The Wingard Cup, Luther Barker Rogers, Patten.

Gilbert M. Gowell Scholarships, Neil Carpenter Sherwood, Cherryfield, and John Walter Hart, Holden.

The highest standing obtained by a member of the class of 1911 for the four years course was made by Dunton Hamlin, Orono.

The Class of 1908 Commencement Cup, which is awarded each year to the class having the largest percentage of its membership back for Commencement, was won in 1909 by the classes of 1872 and 1873, both having the same per cent back, and in 1910 the cup was won by the class of 1875. In 1911 it was won by the class of 1875.

The cup presented by the Senior Skulls to that Fraternity which has during the year maintained the highest average in scholarship was awarded in 1911 to Alpha Tau Omega.

Members of the Phi Kappa Phi

Alfred Michel Blanchard, Southbridge, Mass.; Florence Evelyn Brown, Oldtown; Letitia Elizabeth Day, Brewer; Annie Hoadley Gilbert, Old Orchard; Louise Frances Hall, Belfast; Dunton Hamlin, Orono; Charles Bridgham Hosmer, Hudson, Mass.; Lewis Albert Keen, South Paris; Horace Newton Lee, Greenwood, Mass.; Mildred Louise Prentiss, Brewer; George Ray Sweetser, Bangor; Earle Ovando Whittier, Farmington.

Seniors Receiving General Honors

Alfred Michel Blanchard, Southbridge, Mass.; Florence Evelyn Brown, Oldtown; Frederick William Chenery, Wayne; Letitia Elizabeth Day, Brewer; Annie Hoadley Gilbert, Old Orchard; Louise Frances Hall, Belfast; Dunton Hamlin, Orono; Lewis Albert Keen, South Paris; Horace Newton Lee, Greenwood, Mass.; Cecil Leland Lycette, Houlton; Mildred Louise Prentiss, Brewer; Florence Anna Taylor, Hermon, Elmer Robert Tobey, Norridgewock; Benjamin Otis Warren, Fryeburg; Earle Ovando Whittier, Farmington.

From the College of Law

Charles Bridgham Hosmer, Hudson, Mass.; George Roy Sweetser, Bangor.

Special Honors

Horace Newton Lee, Greenwood, Mass., in Biology.

To be Reported to Adjutant General U. S. Army for Publication in the U. S. Army Register and to the Adjutant General State of Maine

Sumner Waite, Portland.

APPOINTMENTS

Speakers at the Junior Exhibition, June 7, 1911

Helen Willard Averill, Milltown; Philip Garland, Old Town; Warren McDonald, Portland; Helen Charlotte Worster, Bangor.

Speakers at the Sophomore Prize Declamation Contest, Dec. 9, 1910

Forest Bertram Ames, Bangor; Oscar Henry Davis, North Berwick; Alice Josephine Harvey, Bangor; John Walter Hart, Holden; William Joseph McCarthy, Lewiston; Donald Wing Sawtelle, Orono; Glenwood Coding Tilley, Ashland; Antoinette Webb, Bangor.

Members of Phi Kappa Phi

Alfred Michel Blanchard, Southbridge, Mass.; Florence Evelyn Brown, Old Town; Franklin Russell Chesley, Saco; Letitia Elizabeth Day, Brewer; Annie Hoadley Gilbert, Old Orchard; Louise Francis Hall, Belfast; Dunton Hamlin, Orono; Charles Bridgham Hosmer, Hudson, Mass.; Lewis Albert Keen, South Paris; Horace Newton Lee, Greenwood, Mass.; Mildred Louise Prentiss, Brewer; Earle Ovando Whittier, Farmington.

General Honors

Alfred Michel Blanchard, Southbridge, Mass.; Florence Evelyn Brown, Old Town; Frederick Lincoln Chenery, Jr., Wayne; Letitia Elizabeth Day, Brewer; Annie Hoadley Gilbert, Old Orchard; Louise Frances Hall, Belfast; Dunton Hamlin, Orono; Charles Bridgham Hosmer, Hudson, Mass.; Lewis Albert Keen, South Paris; Horace Newton Lee, Greenwood, Mass.; Cecil Leland Lycette, Houlton; Mildred Louise Prentiss, Brewer; George Roy Sweetser, Bangor; Florence Anna Taylor, Hermon; Elmer Herbert Tobey, Norridgewock; Benjamin Otis Warren, Fryeburg; Earle Evando Whittier, Farmington.

Special Honors

Horace Newton Lee, Greenwood, Mass.

Honors in the College of Law

Charles Bridgham Hosmer, Hudson, Mass.; George Roy Sweetser, Bangor.

To be Reported to Adjutant General U. S. Army for Publication in the U. S. Army Register and to the Adjutant General, State of Maine.

Sumner Waite, Portland, Maine.

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agriculture, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ce. Civil Engineering, Ds. Domestic Science, Ec. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Hy. History, Lt. Latin, Ms. Mathematics, Me. Mechanical Engineering, Pm. Pharmacy, Pl. Philosophy, Ps. Physics, Rm. Romance Language.

GRADUATE STUDENTS

Burke, Alvin Kimball, B. S., Ch. University of Maine, 1910	*Kennebunk*	108 H. H. Hall
Buswell, Arthur Moses, B. A., Ch. University of Minnesota, 1910	*Orono*	205 H. H. Hall
Chambers, Sherman Daniel, B. S., M. S., Ce. Baldwin University, 1904	*Orono*	Forest St.
Drew, Ernest Claude, B. S., Ps. University of Vermont, 1909	*Poultney, Vt.*	80 Main St.
Dykstra, John Richard, B. S., Ed. New York University	*Bangor*	The Colonial
Hamlin, Truman Leigh, M. A. Ms. Western Reserve University, 1899 University of Missouri, 1902	*Stillwater*	Stillwater
McManus, Margaret Ellen, B. A., Eh. University of Maine, 1911.	*Bangor*	Bangor
Reed, Lowell Jacob, B. S., Ms. University of Maine, 1907	*Orono*	College St.
Schoppe, William Freeman, B. S., Ag. University of Maine, 1907	*Orono*	North Main St.

Trickey, Harold Albert Mariner, A. B., Ch. Bates College, 1901	*Bangor*	Bangor
Whittier, Earle Ovando, B. S., Ch. University of Maine, 1911	*Orono*	College St.
Wilbur, Walter Edmund, B. S., M. S., Ms. University of Maine, 1908, 1911	*Orono*	86 Main St.

SENIORS

Ash, John Emmons, Ee.	*Bar Harbor*	Θ E House
Averill, Helen Willard, Ch.	*Milltown*	Mt. Vernon House
Ayer, Elmore, Me.	*Dorchester, Mass.*	Α T Ω House
Ballou, William Rice, Ec.	*Bath*	Φ Γ Δ House
Barber, Clarence Wallace, Ag.	*Yarmouth*	Campus
Bartlett, Emily Mary, Bl.	*Orono*	College St.
Benjamin, Charles Smith, Ch.	*Old Town*	Σ X House
Burden, Harry Poole, Ce.	*Lynn, Mass.*	Θ X House
Buzzell, Robert Loring, Ec.	*Old Town*	Δ T Δ House
Carleton, Edward Frazier, Rm.	*So. Groveland, Mass.*	Δ K House
Cavanaugh, Charles Alton, Ag.	*Portland*	107 Oak Hall
Center, Irving Emory, Me.	*Kingston, Mass.*	Δ K House
Chase, Alden, Ee.	*Bryant's Pond*	Θ X House
Clapp, Alma Eliza, Ms.	*Brewer*	Brewer
Cleaves, Carl Schurz, Ce.	*Bar Harbor*	Φ Γ Δ House
Cleaves, Charles Brown, Ee.	*Portland*	Φ Γ Δ House
Coffin, Celia May, Eh.	*Bangor*	Mt. Vernon House
Cronin, John Patrick, Ce.	*Worcester, Mass.*	Δ T Δ House
Crosby, Harry Lawrence, Ce.	*Portland*	K Σ House
Cummings, Nathan Clifford, Ee.	*Gorham*	Φ Γ Δ House
Darrell, Franklin Lloyd, Ce.	*Brooklyn, N. Y.*	Β Θ Π House
Deering, Arthur Lowell, Ag.	*Bridgton*	Φ K Σ House
Dunlap, Clarence, Ag.	*Farmington*	Main St.
Duran, David Ray, Ce.	*Westbrook*	Δ T Δ House
Dyer, Samuel, Ce.	*Attleboro, Mass.*	Δ K House
Eastman, Henry Harlan, Ce.	*Limerick*	Α T Ω House
Emerson, Walter Bradbury, Me.	*Biddeford*	Σ Α E House
Estabrooke, Carl Bertrand, Eh.	*Orono*	Main St.
Estabrooke, Marion Corthell, Ds.	*Orono*	Main St.
Faulkner, Harold Clark, Me.	*Lynn, Mass.*	Θ E House
Fish, Fred Enoch, Ps.	*Farmington*	Δ K House

Fisher, Herbert Leir, Ce.	*Charlotte*	Α Τ Ω House
Flint, Margaret, Pl.	*West Baldwin*	Mt. Vernon House
Garland, Philip, Me.	*Old Town*	Φ Γ Δ House
George, Clifford Henry, Ee.	*East Orrington*	Φ Γ Δ House
Gerrish, Leo Melville, Ee.	*Berlin, N. H.*	Σ Α Ε House
Gordon, Robert James, Ee.	*Bangor*	Bangor
Gould, Maynard Sumner, Ee.	*Camden*	Φ Η Κ House
Gray, William Melvin, Ht.	*Bucksport, R. D. 1*	Φ Κ Σ House
Haskell, Benjamin, Ee.	*Westbrook*	Φ Γ Δ House
Hatch, Harrison Morton, Ag.	*West Groton*	Θ Χ House
Hebard, William Everett, Ps.	*Southbridge, Mass.*	112 H H Hall
Hopkinson, Ralph Stimson, Ee.	*Saco*	Β Θ Π House
Hosmer, George Lawrence, Me.	*Rockland*	Α Τ Ω House
Houghton, Lloyd Everett, Fy.	*Lee*	Φ Κ Σ House
Hussey, Philip Rodney, Fy.	*Patten*	Φ Κ Σ House
Hussey, Robert Elliott, Ch.	*Portland*	Φ Η Κ House
Jackson, James Foster, Ee.	*Jefferson*	Σ Α Ε House
Jacobs, Lester Warner, Ce.	*Rockland, Mass.*	Θ Ε House
Jones, Austin Whittier, Ag.	*Bangor*	Κ Σ House
Jones, Fred Ruel, Ag.	*Mercer*	Forest St.
Jones, Lillian Curtis, Ms.	*Bangor*	Bangor
Jones, Maurice Daniel, Ag.	*Unity*	Park St.
Kelley, Margaret June, Gm.	*Bangor*	Mt. Vernon House
Kent, Benjamin Calvin, Me.	*Stillwater*	Θ Ε House
King, George Edward, Jr., Ce.	*Bethel*	Θ Χ House
Lancaster, Frank Hodgkins, Ce.	*Presque Isle*	Φ Η Κ House
Lilly, Walter Harrison, Ce.	*Woolwich*	Σ Χ House
Macdonald, Roger Winchester, Ce.	*Peabody, Mass.*	Θ Χ House
McDonald, Warren, Ce.	*Woodfords*	Φ Γ Δ House
McKeen, Ellis Wyman, Ht.	*Fryeburg*	Β Θ Π House
Mariner, Hazel Folsom, Eh.	*Milford*	Milford
Merrill, Ruth, Hy.	*Auburn*	100 Main St.
Miller, William James Henry, Fy.	*South Berwick*	Φ Η Κ House
Mountfort, Oscar William, Ce.	*Nashua, N. H.*	Φ Κ Σ House
Mullins, William, Ec.	*Cambridge, Mass.*	Θ Χ House
Murray, Walter Edward, Ee.	*Lynn, Mass.*	Θ Χ House
Newell, Charles William, Ee.	*Houlton*	Φ Κ Σ House
Nickels, Albert Mortimer, Me.	*Cherryfield*	Σ Α Ε House
Nucci, James Francis, Rm.	*Orono*	Pine St.
Osborne, Atlee Burpee, Ce.	*Ft. Fairfield*	Θ Ε House
Parker, George Leavitt, An.	*Skowhegan*	Α Τ Ω House

Parker, William Emery, Ee.	*Harrington*	K Σ House
Perkins, Walter Ezra, Ce.	*Old Town*	Θ E House
Pinkham, Seymour Leroy, Ee.	*Portland*	Φ H K House
Poole, James Plummer, Fy.	*Gloucester, Mass.*	A T Ω House
Rand, Lynne Thomas, Ce.	*Unity*	Σ X House
Reid, Robert Clifford Henry, Ee.	*Bangor*	Φ H K House
Rogers, Luther Barker	*Patten*	K Σ House
Rowe, Charles Winfield, Ag.	*South Paris*	Campus
Russell, Luther Sampson, Ag.	*Orono*	Campus
Savary, Warren Hapgood, Ce.	*East Wareham, Mass.*	Φ H K House
Sawyer, Edward Eugene, Ch.	*Old Town*	Σ X House
Schrumpf, William Ernest, Ag.	*Farmington*	Δ T Δ House
Smiley, Leon Walter, Ce.	*Skowhegan*	Φ Γ Δ House
Smith, Montelle Chester, Ee.	*Old Town*	Θ E House
Southwick, William Alfred, Ee.	*West Peabody, Mass.*	Θ E House
Spear, Graham Brown, Ee.	*Springfield, Mass.*	Σ A E House
Sturtevant, Arthur Leroy, Ag.	*Milo*	Campus
Sullivan, Charles Eugene, Me.	*Gorham, N. H.*	Σ A E House
Sweetser, Harlan Hayes, Fy.	*Cumberland Center*	302 H H Hall
Thompson, Harry Ernest, Ee.	*Bath*	Δ K House
Thompson, Lynwood Burkett, Fy.	*Belfast*	Δ K House
Washburn, Dana Peabody, Ec.	*Calais*	B Θ Π House
White, Marjorie Adelle, Lt.	*Danforth*	Mt. Vernon House
Winchester, Frank William, Ce.	*Nahant, Mass.*	Θ X House
Witham, Walter Remick, Ce.	*Madison*	Φ K Σ House
Woodberry, George Roundy, Ec.	*Beverly, Mass.*	Σ A E House
Woodman, Carrie Luella, Ms.	*Claremont, N. H.*	Mill St.
Woodward, Karl Douglas, Ch.	*Kingston, Mass.*	K Σ House
Worster, Helen Charlotte, Eh.	*Bangor*	Mt. Vernon House

JUNIORS

Ackley, Edward Preble, Ec.	*Peaks Island*	Θ H K House
Amadon, Arthur Franklin, Fy.	*Boston, Mass.*	A T Ω House
Ames, Forrest Bertram, Eh.	*Bangor*	Φ H K House
Annable, Burleigh Ansel, Ce.	*Lynn, Mass.*	Θ X House
Ayer, Harold Francis, Ag.	*Haverhill, Mass.*	Θ X House
Bigelow, Elson Hartwell, Me.	*Bridgton*	K Σ House
Bird, Maurice Cobb, Ag.	*Rockland*	B Θ Π House
Bolton, Philip Sumner, Ch.	*Gorham*	Coburn Hall
Bradbury, Ira Miller, Ce.	*Gorham*	Φ Γ Δ House
Brewer, Warren Grant, Ec.	*Peaks Island*	Φ Γ Δ House

Brown, Henry Leavitt, Ch.	*Ayer, Mass.*	402 H. H. Hall
Burgess, Howard, Ee.	*No. Vassalboro*	Α Τ Ω House
Burns, William Hugh, Ed.	*Dennysville*	University Inn
Cannon, Arthur Hildreth, Me.	*Orono*	Orono
Carleton, John Harvey, Ce.	*South Berwick*	Α Τ Ω House
Chandler, Clifton Edward, Ec.	*Portland*	Φ Γ Δ House
Chase, Edward Everett	*Bluehill*	Σ Χ House
Church, James Elwood, Ch.	*Gardiner*	Δ Τ Δ House
Clark, George Clarence, Ms.	*Portland*	202 Oak Hall
Clark, George Freeman, Ce.	*Tremont*	302 Oak Hall
Creeden, James Coharn, Ce.	*Lewiston*	Θ Χ House
Cronan, Mark Dennis, Ce.	*Middleton, Mass.*	202 H. H. Hall
Crossman, Mae Evelyn, Eh.	*Claremont, N. H.*	Mt. Vernon House
Davis, Oscar Henry, Me.	*North Berwick*	Κ Σ House
Dillingham, Winfield Presbury, Ce.	*Freeport*	Κ Σ House
Dyer, Guy Valentine, Ec.	*Calais*	Σ Χ House
Finkbeiner, Daniel Talbert, Ce.	*Clearfield, Penna.*	16 Bennock St.
Floyd, Raymond, Ce.	*Brewer*	Φ Κ Σ House
Groves, Walter Clyde, Ce.	*Camden*	Α Τ Ω House
Haines, Frank Warren, Ee.	*Dexter*	Β Θ Π House
Hamlin, George Harold, Ec.	*Orono*	92 Main St.
Harriman, Royden Henry, Ee.	*Bangor*	Bangor
Hart, John Walter, Ag.	*Holden*	Σ Α Ε House
Harvey, Alice Josephine, Ds.	*Bangor*	Bangor
Higgins, Thomas Carol, Ce.	*Bar Harbor*	Θ Ε House
Hinkley, Harry Wendell, Ce.	*Rangeley*	202 H. H. Hall
Huggins, Leslie Mansfield, Me.	*Malden, Mass.*	112 H. H. Hall
Huntington, Richard Thomas, Eh.	*Augusta*	Σ Α Ε House
Jackman, Percy Edward, Ht.	*Vanceboro*	Park St.
Jackson, Raymond Olden, Me.	*Harrison*	Stillwater
Jennison, Elwood Whitney, Me.	*Bangor*	Κ Σ House
Jordan, Harry Gilman, Ce.	*Waltham*	Φ Κ Σ House
Kingsbury, Forrest Pearl, Ce.	*Brewer*	Θ Η Κ House
Knight, Carroll Morse, Ce.	*Cliftondale, Mass.*	Φ Η Κ House
Leonard, Paul Cyprian, Ee.	*Frankfort*	Pine St.
Littlefield, John Ce.	*Brewer*	Φ Κ Σ House
Long, Roger David, Ht.	*No. Raymond*	Φ Γ Δ House
Lutts, Carlton Gardiner, Ch.	*Kittery*	Σ Χ House
McAlary, Allan Francis, Ce.	*Waterville*	Α Τ Ω House
McCarthy, William Joseph, Ch.	*Lewiston*	Θ Ε House
Merrill, Mildred Hastings, Ds.	*Auburn*	100 Main St.

Merrill, William Hammond, Ee.	*Bangor*	Σ A E House
Mitchell, William Johnston, Ce.	*New Bedford, Mass.*	Δ K House
Nash, Harold Harlem, Ag.	*Camden*	Φ H K House
Nealey, James Barton, Ce.	*Bangor*	Bangor
Norton, Carlos Everett, Ag.	*Cumberland Center*	Δ K House
Ober, John Larcom, Ee.	*Beverly, Mass.*	Σ A E House
Parsons, John Thomas, Ee.	*South Paris*	Pine St.
Pinkham, Robert Arthur, Ee.	*Farmington*	202 H. H. Hall
Platt, James Nelson, Ce.	*Abington, Conn.*	102 H. H. Hall
Pope, Morrill Stuart, Ce.	*East Machias*	Φ Γ Δ House
Power, Richard Anderson, An.	*Portland*	Φ H K House
Quarmby, George Henry, Ee.	*Saugus, Mass.*	K Σ House
Richards, Harold Albion, Ee.	*Belfast*	Δ K House
Richardson, Carroll Raymond, Ee.	*Oakland*	202 H. H. Hall
Ricker, Elwyn Tristram, Ce.	*North Saco*	K Σ House
Sansoucie, William, Ht.	*Southbridge, Mass.*	Θ X House
Savage, Ernest Thompson, Fy.	*Bangor*	Bangor
Sawtelle, Donald Wing, An.	*Orono*	Forest St.
Seekins, Leon Elroy, Ee.	*Skowhegan*	K Σ House
Shepard, Thomas Dudley, Fy.	*Wellesley Hills, Mass.*	Campus
Simpson, George Stevens, Ch.	*Marlboro, Mass.*	Θ E House
Skolfield, Herbert Nason, Ce.	*Brunswick*	Φ K Σ House
Small, Nathan Houston, Ec.	*Belfast*	Δ K House
Smith, Leon Campbell, Fy.	*Topsham*	Φ H K House
Smith, Oscar Samuel, Pl.	*Orono*	Oak St.
Stone, Walter Christopher, Ch.	*Clinton, Mass.*	University Inn
Tabor, James Atwood, Jr., Ch.	*Corinna*	Φ H K House
Talbot, Ralph Lee, Ee.	*Lewiston*	Φ H K House
Tilley, Glenwood Goding, Ee.	*Ashland*	A T Ω House
Tuck, Leon Sylvester, Ce.	*Lee*	14 Bennoch St.
Wallace, John Clyde, Ce.	*Portland*	B Θ Π House
Wardwell, Hubert Maurice, Jr., Ms.	*Newport*	Φ H K House
Webb, Antoinette Treat, Eh.	*Bangor*	Mt. Vernon House
Wescott, Clifford Walker, Ag.	*Patten*	K Σ House
Wetherbee, Ralph Wilbur, Ee.	*Hudson, Mass.*	Φ Γ Δ House
Wilson, Warren LeRoy, Ec.	*Houlton*	Δ T Δ House
Woodsum, Edmund Nugent, Me.	*Fairfield*	111 Oak Hall

SOPHOMORES

Abbott, Arthur Warren, Ec.	*Portland*	Φ Γ Δ House
Adams, Harold Purington, Ee.	*Bowdoinham*	Φ K Σ House

Allen, Charles Francis, Mc.	*Medfield, Mass.*	405 H. H. Hall
Allen, Clifton Lowery, Ce.	*Mt. Vernon*	University Inn
Andrews, Robert Wilbur, Ce.	*West Pembroke*	Β Θ Π House
Anthony, Benjamin Bennett, Fy.	*Wakefield, Mass.*	Σ X House
Atwood, Charles Raymond, Fy.	*Rumford*	Σ Λ E House
Bartlett, Louise, Lt.	*Orono*	College St.
Bean, Philip Hanson, Ce.	*Saco*	No. Main St.
Beaupre, Estelle Inez, Rm.	*Bangor*	396 Hammond St., Bangor
Blanchard, Franklin Roy, Ec.	*Beverly, Mass.*	301 H. H. Hall
Bodwell, Joseph Henry, Ag.	*Methuen, Mass.*	Σ Λ E House
Boothby, Ralph Hamilton, Ce.	*Portland*	Σ X House
Bray, Paul DeCosta, Ch.	*Turner*	Β Θ Π House
Brown, Joseph Lewis, Ps.	*Bar Harbor*	Φ H K House
Brown, Lewis John, Ag.	*Gorham, N. H.*	Δ T Δ House
Buck, William Harold, Ce.	*Ansonia, Conn.*	201 Oak Hall
Buzzell, Marion, Rm.	*Old Town*	Old Town
Chalmers, Dwight Stillman, Ee.	*Albion*	201 Oak Hall
Chapman, Fred Elton, Ee.	*Lake Hermon*	212 H. H. Hall
Chase, Charles Arthur, Fy.	*Sebec Station*	Δ T Δ House
Clark, Hermon Richard, Ee.	*Townsend, Mass.*	203 H. H. Hall
Clifford, Ernest Alfred, Ce.	*Brunswick*	Λ T Ω House
Cobb, Harold Vernon, Ec.	*Livermore Falls*	Σ Λ E House
Cousins, Mary Longfellow, Lt.	*Old Town*	Old Town
Coyne, Albert Leo, Ce.	*Worcester, Mass.*	Δ T Δ House
Cristy, George Linsley, Ag.	*Providence, R. I.*	311 Oak Hall
Crocker, Richard Foster, Ag.	*Belfast*	Λ T Ω House
Crowell, Harrison Philip, Ce.	*So. Portland*	Θ E House
Danforth, Stephen Paul, Eh.	*Foxcroft*	Θ X House
Dearborn, Fred Earle, Ch.	*Pinacook, N. H.*	Main St.
Dinsmore, Harold Lee, Ee.	*Franklin, Mass.*	Φ K Σ House
Dore, Edward Albert, Ee.	*Bangor*	401 H. H. Hall
Eaton, Arthur Galen, Ee.	*Bangor*	K Σ House
Ferguson, Albert Barnett, Pl.	*New York, N. Y.*	K Σ House
Ferguson, Russell Sweetser, Bl.	*New York, N. Y.*	K Σ House
Field, Leon Albion, Me.	*Biddeford*	Σ Λ E House
Foster, David Albert, Ce.	*Ellsworth Falls*	Oak Hall
Fowler, Ernest Eugene, Me.	*Hartford, Conn.*	Σ Λ E House
French, Norman Richards, Ps.	*Ft. Fairfield*	Σ X House
Gerrish, Harold Colby, Ec.	*Haverhill, Mass.*	210 H. H. Hall
Getchell, Edward Leonard, Ee.	*Winslow*	Σ Λ E House
Gifford, William Edward, Ce.	*Fairfield Ctr.*	306 H. H. Hall

Grace, William Wallace, Ec.	*Wakefield, Mass.*	Σ X House
Grant, Charles Ephriam, Ee.	*Winterport*	212 H. H. Hall
Haggart, Alexander LeRoy, Ce.	*Franklin, Mass.*	Φ K Σ House
Hall, Ernest Melvin, Me.	*Northeast Harbor*	Φ K Σ House
Hall, Howe Wiggin, Ag.	*Rockland*	Φ Γ Δ House
Hamill, Clarence Thomas, Ch.	*Worcester, Mass.*	Δ T Δ House
Harris, Arthur Newton, Ht.	*Woodfords*	B Θ Π House
Harvey, Everett Burton, Eh.	*Bar Harbor*	Φ H K House
Haskell, Theodore Winthrop, Ec.	*Westbrook*	Φ Γ Δ House
Hayes, Alden Burgess, Me.	*Bangor*	Σ A E House
Hettinger, Frederick Carle, Ch. Eng.	*Roslindale, Mass.*	Δ T Δ House
Higgins, Oswald Burnett, Me.	*Sewaren, N. J.*	K Σ House
Hobart, Aileene Browne, Eh.	*Milford*	Milford
Hudson, James Russell, Ag.	*Winthrop*	B Θ Π House
Johnson, William Alonzo, Ee.	*Bangor*	210 H. H. Hall
Jones, Carrol Clair, Ec.	*Solon*	Φ H K House
Jones, Frederic Sawtelle, Ee.	*Augusta*	B Θ Π House
* Jones, Linwood Stuart, Ce.	*Belfast*	Λ T Ω House
Jordan, Marion Luella, Lt.	*Old Town*	Old Town
Junkins, John Norman, Me.	*Milford, N. H.*	Δ K House
Kelly, Charles Merrill, Jr., Ee.	*Ipswich, Mass.*	Φ H K House
Kimball, William Earle, Ce.	*South Paris*	Φ K Σ House
King, Albert Lincoln, Fy.	*South Paris*	Φ K Σ House
Leavitt, Harry Ralph, Fy.	*Portland*	Δ T Δ House
Lewis, Fred Justin, Ce.	*Springfield, Mass.*	203 H. H. Hall
Loftus, Edward Michael, Ch. Eng.	*Bangor*	Θ X House
McLauchlan, Leo, Ag.	*Ft. Fairfield*	Φ K Σ House
MacNeil, George Andrew, Ms.	*Pawtucket, R. I.*	Θ X House
Makanna, Nicholas Philip, Ce.	*Bangor*	Bangor
Martin, Preston Hussey, Ec.	*Ft. Fairfield*	Φ Γ Δ House
Martinelli, Mario, Ch.	*Wareham, Mass.*	405 H. H. Hall
Merrill, Paul Bemoth, Ag.	*Augusta*	16 Main St.
Mitchell, Thomas Crawford, Ce.	*Southbridge, Mass.*	Θ X House
Monohon, Paul Wheeler, Ag.	*Biddeford, R. F. D. No. 4*	Φ K Σ House
Morris, Frank Albert, Ee.	*Old Town*	Old Town
Morse, Wilson Montgomery, Ag.	*Waterford*	Φ K Σ House
Murray, Paul Elmer, Ee.	*Skowhegan*	K Σ House
Newman, George Burgess, Bl.	*Fryeburg*	K Σ House
Norcross, Fernando Treat, Ce.	*Portland*	Φ Γ Δ House
Patterson, Lyle Leach, Ee.	*Newport*	Δ K House
Patterson, Sidney Winfield, An.	*Winslow*	303 H. H. Hall

* In partial standing.

Peaslee, Roy William, Ag.	*Randolph*	Δ T Δ House
Pendleton, Mark, Ee.	*Islesboro*	B Θ Π House
Perkins, Anna Belle, Rm.	*Skowhegan*	College St.
Phelps, Donald Walker, Me.	*Robbinston*	No. Main St.
Philbrook, Philip Edwin, Me.	*Woodfords*	Λ T Ω House
Pickard, Wilfred Brown, Ce.	*Hopedale, Mass.*	Θ E House
Pierce, Clarence Cheney, Ce.	*Berlin, N. H.*	Θ X House
Pray, John Leslie, Ce.	*West Eden*	Θ E House
Pride, Woodbury Freeman, Ce.	*Auburn*	311 Oak Hall
Randall, Harry Burnham, Ee.	*Milford*	Milford
Rounds, Gerald Arlester, Ce.	*Portland*	Φ H K House
St. Onge, Arthur Amos, Rm.	*Dover*	Δ T Δ House
Sherwood, Neil Carpenter, Ag.	*Cherryfield*	Park St.
Sinkinson, George Edward, Ec.	*Somersworth, N. H.*	Σ X House
Smith, Frank Allen, Ag.	*Jamaica Plain, Mass.*	Θ E House
Stevens, Roland Earle, Ag.	*Belfast*	Λ T Ω House
Stiles, Robert Mark, Ag.	*Brooks*	Φ H K House
Stinchfield, Ruth, Eh.	*Danforth*	Mt. Vernon House
Strong, Joseph William, Jr., Ce.	*Wilmington, Mass.*	Σ X House
Sturgis, David William, Fy.	*Gorham*	K Σ House
Thomas, Philip Webb, Ce.	*Portland*	Φ Γ Δ House
Towner, Wayland Dean, Fy.	*Bangor*	Σ X House
Treat, Gladys Evelyn, Gm.	*Monroe, R. F. D.*	Mt. Vernon House
Trefethen, Henry Porter, Ag.	*Waterville*	2 Bennoch St.
True, Elmer LaForest, Ag.	*Hope*	Φ H K House
Twitchell, Carl Elmer, Me.	*Patten*	Φ K Σ House
Varnum, John Prescott, Ce.	*Bangor*	Θ X House
Walker, James Clifford, Ee.	*Portland*	Θ X House
Ward, William Gordan, Ch.	*Attleboro, Mass.*	110 H. H. Hall
Whitten, Alice Idella, Lt.	*Belfast*	Mt. Vernon House
Wilder, Max Lincoln, Ce.	*Augusta*	Σ A E House
Willard, Sherwood Howe, Ee.	*Greenfield, Mass.*	Φ H K House
Woodwell, Carroll Masters, Ag.	*South Bristol*	Campus
Youngs, Frederick Shaw, Ce.	*New York, N. Y.*	B Θ Π House

FRESHMEN

Aageson, Wilbur Cole, Ag.	*Thomaston*	306 H. H. Hall
Adams, James Abraham, Ms.	*Orono*	35 Mill St.
Albee, Guy Edwin, Ag.	*Machias*	Θ X House
Allen, Charles Stanley, Ce.	*Augusta*	Σ X House
Arno, Ivan Winfield, Fy.	*Bethel*	Θ E House

Babb, George Wilford, Ec.	*Portland*	Σ X House
Bailey, Harold Perry, Ee.	*Dexter*	Β Θ Π House
Baker, David Seth, Ce.	*Caratunk*	Α Τ Ω House
Baldwin, Arthur George, Ee.	*Reading, Mass.*	306 Oak Hall
Banks, Merton Ford, Ce.	*Biddeford*	Σ Α Ε House
Beale, Douglas Marsh, Ag.	*Orono*	Peters St.
Bennett, Daniel Clinton, Ce.	*Wilson's Mills*	Θ X House
Bernheisel, George Hench, Ag.	*New Bloomfield, Pa.*	Φ Κ Σ House
Beverage, Harold Henry, Ee.	*No. Haven*	103 H. H. Hall
Blaisdell, Lawrence Allen, Ee.	*Lynn, Mass.*	Θ Ε House
Bragg, Alfred Orman, Ee.	*Foxcroft*	310 H. H. Hall
Brennan, James Joseph, Ee.	*Bangor*	Bangor
* Brennan, Rosemary Agnes, Gm.	*Bangor*	Bangor
Brewster, Joseph Evan, Fy.	*Utica, N. Y.*	Φ Η Κ House
Brockway, Earle Maurice, Fy.	*Dexter*	311 H. H. Hall
Brooks, James Stothard, Ce.	*Brewer*	Φ Κ Σ House
Brown, Arline Leora	*Old Town*	Old Town
Browning, Neva Lenore, Rm.	*Orono*	Orono
Bryant, Robert Hampden, Ee.	*Biddeford*	Φ Κ Σ House
Burnett, Joseph Hamilton, Ec.	*E. Boston, Mass.*	Σ Α Ε House
Burr, Charles Washington, Fy.	*Northeast Harbor*	Φ Κ Σ House
Butters, Arthur Erwin, Ee.	*Old Town*	Old Town
Carle, Amos Earle, Ag.	*Malden, Mass.*	Σ X House
Caswell, Lester Woodsum, Rm.	*Harrison*	102 H. H. Hall
Cheney, Glenn Rexford, Ee.	*Limestone*	211 H. H. Hall
Clark, Robert Pinkham, Ec.	*Lincoln*	Α Τ Ω House
* Close, Richard Edgerly, Ee.	*Bangor*	210 H. H. Hall
Coffin, Everett, Ce.	*Brunswick*	28 No. Main St.
Coffey, Ralph Thompson, Ht.	*So. Brewer*	Basin Mills
Coombs, Olive Erdine, Lt.	*No. Islesboro*	College St.
Cooper, Harold, Me.	*Auburn*	402 H. H. Hall
Crandall, James Stuart, Ce.	*Malden, Mass.*	407 H. H. Hall
Creighton, Maynard Joshua, Ch. Eng.	*Thomaston*	110 H. H. Hall
Crosby, Carle Byron, Ee.	*Hampden*	309 H. H. Hall
Davis, Lucretia Almira	*Old Town*	Old Town
Donahue, Norman Sylvester	*Luthersburg, Pa.*	Κ Σ House
Dorsey, Llewellyn Morse, Ee.	*Augusta*	Σ Α Ε House
Douglas, Chauncey Hazen, Fy.	*Peabody, Mass.*	College St.

* In partial standing.

Douglass, Raymond Donald, Ms.	*Gorham*	308 H. H. Hall
Doyle, Joseph Edward, Fy.	*Salem, Mass.*	404 H. H. Hall
Dufficy, Edward Charles, Ch. Eng.	*Rumford*	211 H. H. Hall
Easson, Ralph Barrows, Ag.	*So. Paris*	301 H. H. Hall
Edminster, Winfred Herbert, Pm.	*Dixmont, R. No. 1*	310 H. H. Hall
* Elliott, Park, Ee.	*Dover*	401 H. H. Hall
Emmons, Norman Eudell, Ee.	*Chester, Conn.*	109 H. H. Hall
Evans, James Alfred, Ch. Eng.	*Bangor*	K Σ House
Eveleth, Edgar Kempton, Ee.	*Upper Gloucester*	101 H. H. Hall
Fish, Harold Mahlon, Ag.	*Farmington*	101 Oak Hall
Fletcher, Roland Ezra, Fy.	*Madison*	Θ E House
Fogg, Harry Willard, Fy.	*Hull's Cove*	Θ E House
Fogler, Raymond Henry, Ag.	*West Rockport*	Σ X House
Freese, Frank Drummond, Ec.	*Bangor*	K Σ House
George, Daisy Evelyn	*Orono*	27 Pine St.
Gerhardts, Emma, Ds.	*Westbrook*	Mt. Vernon House
Gerrish, Maurice Sylvester, Ag.	*Melrose, Mass.*	208 H. H. Hall
Gilman, Madison Leavitt, Ec.	*Anson*	B Θ Π House
Glover, John White, Me.	*Rockland*	Σ X House
Goldsmith, Chester Hamlin, Ch.	*Beverly, Mass.*	206 H. H. Hall
Goodwin, Earl Corson, Ec.	*Oakland*	Δ T Ω House
Gowen, John Whittemore, Ag.	*Arlington, Mass.*	104 H. H. Hall
Graham, Clyde Lewis, Ee.	*Northumberland, N. H.*	407 H. H. Hall
Graves, Justin Dwight, Ce.	*Orono*	B Θ Π House
Graves, Margaret, Ds.	*Orono*	Myrtle St.
Gray, Ethel Mae, Lt.	*So. Penobscot*	Mt. Vernon House
Hall, Preston Martin, Ch.	*Taunton, Mass.*	Φ Γ Δ House
Hamel, Leslie Atkeson, Ag.	*Portland*	Oak Hall
Hanly, Elizabeth Fitzgerald, Eh.	*Thomaston*	Main St.
Hanson, Ernest Freeman, Ec.	*Gorham*	Φ Γ Δ House
Haskell, Laurence Herbert, Ce.	*Lynn, Mass.*	111 H. H. Hall
* Hatch, Frederic Boynton, Ce.	*Pemaquid Harbor*	301 Oak Hall
Hayford, Herbert Wilder, Gm.	*Dover*	Δ T Δ House
Hill, William Barlow, Fy.	*Gorham*	K Σ House
Hines, Mary Elizabeth Burns, Lt.	*Middletown, Conn.*	Mt. Vernon House
Hirst, Charles, Ag.	*Welchville*	Campus

* In partial standing.

Hodgins, Laura Pearl, Lt.	*Calais*	Mt. Vernon House
Hodgins, Mary Charlotte, Eh.	*Calais, R. No. 20*	Mt. Vernon House
Hodgkins, William Glidden, Ee.	*Damariscotta*	Δ T Δ House
Holyoke, Margaret Lillis, Ds.	*Brewer*	Mt. Vernon House
Hopkins, Carl Herbert, Ce.	*Camden*	Α T Ω House
Howland, Edgar Gordon, Ee.	*Plymouth, Mass.*	Κ Σ House
Hutchins, Mollie Chase, Gm.	*Fryeburg,*	Mt. Vernon House
Hutchinson, Albert Fletcher, Ee.	*No. Dexter*	311 H. H. Hall
Ingalls, Everett Palmer, Ce.	*Bridgton*	Β Θ Π House
Jones, Harold Libby, Ce.	*Corinna*	401 H. H. Hall
Ketchen, Ralph Cleon, Ee.	*Great Works*	Great Works
Kelly, Francis Anthony, Fy.	*No. Andover, Mass.*	Δ T Δ House
Kimball, Roland Gerry, Pm.	*Norway*	Φ Κ Σ House
King, Henry Augustus, Ag.	*Peabody, Mass.*	Θ Ε House
Kneeland, Nehemiah Washington, Ec.	*Princeton*	Δ Κ House
Knowlton, Dorothy Spaulding, Ps.	*Brewer*	Brewer
Leach, Luther Adelbert, Jr., Ee.	*Bar Harbor*	Δ T Δ House
Leavitt, Harold Walter, Ce.	*Monmouth*	409 H. H. Hall
Lewis, James Henry, Ag.	*Eastport*	Φ Η Κ House
Lindgren, Ray Harrison, Me.	*Belfast*	204 H. H. Hall
Luther, Harris Gates, Me.	*Hadlyme, Conn.*	109 H. H. Hall
Lyon, Clement Ames, Ag.	*Pittsfield*	104 H. H. Hall
McBride, Herbert Clayton Grover, Ee.	*Easton*	Β Θ Π House
McDonough, John Anthony, Ce.	*Lewiston*	Θ Χ House
McFadden, Lloyd Hamilton, Ce.	*Auburn*	Θ Χ House
McGrath, William Joseph, Ch. Eng.	*Rumford*	211 H. H. Hall
McKenney, Charles Raymond, Ag.	*Orono*	Α T Ω House
McKenney, Maurice Roy, Ee.	*Stillwater*	Stillwater
Mace, Asa Russell, Ec.	*Aurora*	Φ Κ Σ House
Magnus, Carl, Me.	*Biddeford*	No. Main St.
Martin, William Hope, Fy.	*Carlisle, Pa.*	Σ Χ House
Mathews, Norman Lyle, Ee.	*Waterville*	410 H. H. Hall
Medina, John, Jr., Ce.	*W. Somerville, Mass.*	Δ T Δ House
Merrill, Gladys Helen, Rm.	*Orono*	Campus
Merrill, Philip Knight, Ee.	*Woodfords, R. No. 2*	Δ T Δ House
Milliken, William Laurence	*Bridgewater*	Α T Ω House
Moore, Ralph Lee, Ee.	*Hallowell*	401 H. H. Hall
Moore, Robert McGregor, Me.	*Biddeford*	Φ Κ Σ House
Morrell, Lester Howe, Fy.	*Lewiston*	Θ Η Κ House

Noyes, Elwood Austin, Ag.	*Limestone*	211 H. H. Hall
Oak, Malcolm Hayford, Ch. Eng.	*Caribou*	Β Θ Π House
* O'Brien, Edward Francis, Ee.	*Lawrence, Mass.*	Β Θ Π House
Olson, John Oscar, Me.	*Belfast*	Δ Κ House
Parker, Joseph Batchelder, Ag.	*Bangor*	Bangor
Parks, David Weaver	*Ft. Fairfield*	409 H. H. Hall
Patten, Montford Elmer, Fy.	*Carmel, R. No. 3*	212 H. H. Hall
* Perry, Earl Francis, Ag.	*Bangor*	Bangor
Pettey, Willis Thurston, Ag.	*No. Dartmouth, Mass.*	207 H. H. Hall
Philbrick, John Harvey, Ag.	*Bangor*	301 H. H. Hall
Philbrook, Walker Merriam, Ee.	*Rockport*	303 H. H. Hall
Pierce, Raymond Trussell, Ee.	*Bangor*	Σ Λ Ε House
Pirkham, Lloyd Francis, Ee.	*Lewiston*	409 H. H. Hall
Plummer, Harold Francis, Ag.	*Lewiston*	307 H. H. Hall
Poore, Alice Mildred, Lt.	*Red Beach*	Mt. Vernon House
Popkin, Hyman, Fy.	*Portland*	412 H. H. Hall
Pretto, Franklin Edward	*Orono*	6 Peters St.
Rand, Ernest Abbott, Fy.	*Portland*	Φ Κ Σ House
Randall, Harry Algernon, Ee.	*So. Portland*	103 H. H. Hall
Randall, James Stuart, Ce.	*Whitman*	406 H. H. Hall
Redman, William Wason, Ag.	*Dedham, Mass.*	208 H. H. Hall
Rhind, Ethel Knowlton, Lt.	*Bucksport*	Mt. Vernon House
Richardson, Edward Clinton, Ag.	*Portland*	Θ Ε House
* Roberts, George Harley, Ch.	*Brownville Junct.*	Β Θ Π House
Robinson, Madeline Frances, Rm.	*Bangor*	Bangor
Rowe, Daniel Mannix, Fy.	*Portland*	Δ Τ Δ House
Russell, Asenath, Ds.	*Orono*	Campus
Sawyer, Grace Ruth, Lt.	*Old Town*	Old Town
Sawyer, Leon George, Ee.	*Bridgton, R. No. 1*	312 H. H. Hall
Schwey, Abram Ira, Fy.	*Portland*	412 H. H. Hall
Searle, Irvin Karsner, Ch.	*Lowell, Mass.*	406 H. H. Hall
Shaw, Merle Branard, Ch.	*Orono*	Park St.
Sheridan, Philip Brimsley, Ee.	*Salem, Mass.*	Θ Ε House
Shields, Victor Hopkins, Ch.	*Vinalhaven*	Φ Γ Δ House
Sleeper, Harvey Prescott	*Bangor*	Φ Κ Σ House
Slocum, Paul Frederick, Ce.	*Brooklyn, N. Y.*	Φ Γ Δ House
Smart, Frances Gertrude	*Bangor*	Bangor
Stewart, Loren Prescott, Ce.	*Thorndike*	203 H. H. Hall

* In partial standing.

Stormann, Howard William, Pm.	*Stillwater*	Stillwater
Sukeforth, Raymond Oscar, Ec.	*Ft. Fairfield*	Σ X House
Swift, Clarence Earle, Ce.	*Auburn*	Θ X House
* Thompson, Frederick Mosher, Fy.	*Portland*	205 Oak Hall
Thompson, William Raymond, Ag.	*Orono*	Margin St.
Thurrell, Robert Freeman, Ee.	*Portland*	Φ Γ Δ House
Titcomb, Harry Alton, Ch.	*So. Paris*	301 H. H. Hall
Towle, Horace Hamblen, Jr., Ee.	*Portland*	Φ Γ Δ House
Treworgy, Forrest Reuben, Ee.	*Ellsworth*	209 H. H. Hall
Varney, Arthur Freeman, Ce.	*Eastport*	Θ X House
Varney, Ross Harold, Ag.	*Haverhill, Mass.*	207 H. H. Hall
Warren, Paul Alanson, Ag.	*Dover*	Δ T Δ House
* Watson, Carlisle Vives, Ee.	*Portland*	Θ X House
Weeks, Jedediah Earle, Ce.	*Wells*	16 Bennoch St.
White, Harold Chandler, Ch. Eng.	*Bangor*	K Σ House
Whitehead, Alton Eugene, Ag.	*Norway*	204 H. H. Hall
Whitney, Thomas Boardman, Ce.	*Caribou*	103 H. H. Hall
Whittier, Clyde Levi, Me.	*Waterville*	410 H. H. Hall
Wilbur, Oscar Milton, Ag.	*Pembroke*	88 Main St.
Williams, Harry Duncan, Ec.	*No. Easton, Mass.*	302 H. H. Hall
Winship, Rachel Helene, Ds.	*Auburn*	Mt. Vernon House
Woodbury, Newell Brown, Me.	*Beverly, Mass.*	206 H. H. Hall
Woodman, Edward, Jr., Ag.	*Portland*	Φ Γ Δ House
Woodward, George Thomas, Me.	*Lisbon Falls*	Crosby St.
Worcester, Henry Franklin, Ee.	*Old Orchard*	Σ X House
York, Harry Alfred, Ee.	*Mars Hill*	B Θ Π House
Young, Mildred May	*Solon*	Mt. Vernon House

SPECIALS

Bagdoyan, Bagsar Manoog, Ag.	*Aintab, Turkey*	309 Oak Hall
Bickford, Everett Sumner	*So. Brewer*	So. Brewer
Brown, Olin Chellis, Ce.	*Bar Harbor*	Φ H K House
Chapman, Chauncey Wallace Lord, Fy.	*Old Town*	Δ T Δ House
Cheswell, Ernest Conant, Ch.	*Orono*	Main St.
Chilcott, Rebecca, Ds.	*Bangor*	Bangor
Durning, Wilson Alonzo, Ag.	*Winterport*	Α T Ω House
Erswell, Charles Sherman, Ch.	*Brunswick*	Θ X House
Ferguson, George, Ee.	*Springvale*	Σ X House

* In partial standing.

Fiske, Raymond Houghton, Fy.	*Lincoln*	209 H. H. Hall
Goodwin, Eugene Wiley, Me.	*Rockport*	307 H. H. Hall
Gregson, Lawrence Halliwell, Fy.	*Buffalo, N. Y.*	Δ T Δ House
Guthrie, George Francis, Ce.	*Bangor*	Bangor
Hamill, Robert Elmer, Me.	*Worcester, Mass.*	Δ T Δ House
Heath, Herbert Milton, Jr., Me.	*Augusta*	Σ Λ E House
Hewes, Ray Dalma, Ag.	*Ashland*	Δ K House
Holway, Charles Josiah, Fy.	*Madison*	Φ K Σ House
Jones, Fred Reuel, Ht.	*Mercer*	Forest St.
McLaughlin, Percy Daniel, Ag.	*Costigan*	K Σ House
Melincoff, John Henry, Fy.	*Lawrence, Mass.*	207 Oak Hall
Murphy, George William, Ce.	*Portland*	K Σ House
Newcomb, Erwin Barrett, Ce.	*Cumberland Mills*	Σ X House
Redman, Ralph Woodbury, An.	*Orono*	No. Main Street
Richardson, Douglass Leffingwell, Ec.	*McKinley*	K Σ House
Richardson, Howard Byron, Ce.	*Southwest Harbor*	Φ K Σ House
Schimmel, Erich, Ch.	*Orono*	305 H. H. Hall
Severence, Amanda Bailey, Lt.	*Old Town*	Old Town
Stobie, George James, Ag.	*Waterville*	Λ T Ω House
Stone, Irving Orrison, Ce.	*Augusta*	B Θ Π House
Tibbetts, Elsie Dorothea, Eh.	*Bangor*	Bangor
Walters, Philip Harris, Ag.	*Readfield, R. F. D. No. 27*	Campus
Weston, Edward Gordon, Ee.	*Fryeburg*	Δ K House
Wildes, Robert Patten, Ag.	*Skowhegan*	Λ T Ω House
Wilson, Roger James, Ee.	*West Jonesport*	Σ Λ E House
York, George James, Hy.	*Yarmouthville*	Θ X House

THE COLLEGE OF LAW

GRADUATE STUDENTS

Allen, George Herman, B. S. B. S., University of Maine, 1884	*Portland*	
Bass, Frank Lyman, B. A., LL. B. Bowdoin College, 1907. University of Maine, 1910	*Bangor*	82 Third St.
Blanchard, Benjamin Willis, LL. B. University of Maine, 1904	*Bangor*	118 Congress St.
Bridges, Corril Ellsworth, LL. B. Albany Law School, 1887	*Charlestown, Mass.*	
Brown, Leon Gilman Carleton, LL. B. University of Maine, 1905	*Milo*	

Cartier, Arthur Jean Baptiste, LL. B. *Biddeford*
University of Maine, 1909

Clough, George Edwin, LL. B. *Palmer, Mass.*
University of Maine, 1904

Cotton, Carl, B. A., LL. B. *Contocook, N. H.*
Colby College, 1900. University of Maine, 1906

Davis, Waldo Trevor, B. A., LL. B. *Worcester, Mass.*
Dartmouth College, 1901. University of Maine, 1905

Dudley, John Perley, LL. B. *Houlton*
Colby College. University of Maine, 1908

Foster, Walter Herbert, LL. B. *Boston, Mass.*
University of Maine, 1905

Craton, Claude Dewing, LL. B. *Burlington, Vt.*
University of Maine, 1900

Juchhoff, Frederick, A. M., Ph. D.,
LL. B., LL. D. *Chicago, Ill.*
Kansas City University. Ohio Northern University. Greer College, Illinois

Lemaire, Charles Wendell, LL. B. *Taunton, Mass.*
University of Maine, 1910

Lewis, Charles Goodell, LL. B. *Boston, Mass.*
University of Maine, 1908

Linehan, Daniel Joseph, LL. B. *Haverhill, Mass.*
University of Maine, 1905

Lord, Harry, LL. B. *Bangor* 82 Cumberland St.
University of Maine, 1902

Merrill, Wilbur Frances, LL. B. *Wiscasset*
University of Maine, 1911

Monroe, Edward Roy, LL. B. *Portland*
University of Maine, 1907

Noble, Ernest Eugene, B. A., LL. B. *Portland*
Colby College, 1897. University of Maine, 1903

Perkins, DeForest Henry, Ph. B.,
M. A., LL. B. *Portland*
University of Maine, 1900, 1905. Illinois College of Law, 1906

Record, Lewis Stillman, Ph. B.,
LL. B. *Newport, N. H.*
Brown University, 1902. University of Maine, 1905

Reid, Charles Hickson, LL. B. *Bangor* 60 Lincoln St.
University of Maine, 1903

Robinson, Curville Charles, LL. B. *New York City*
University of Maine, 1905

Seavey, Ernest Linwood, LL. B. *San Francisco, Cal.*
University of Maine, 1908
Skillin, Carroll Brown, LL. B. *Portland*
University of Maine, 1908
Toole, Christopher, LL. B. *Hartford, Conn.*
University of Maine, 1910
Warren, John Clifford, B. S., LL. B. *Portland*
University of Maine, 1902. Boston University, 1905

SENIORS

Adams, Frederick Prescott	*Cherryfield*	76 Sanford St.
Baldwin, William Vincent Reginald	*No. Wilbraham, Mass.*	214 French St.
Bowen, Everett Harlow, B. A.	*Bangor*	53 15th St.
Colgate University, 1903. M. S., University of Maine, 1905		
Burns, Joseph Leo	*Taunton, Mass.*	Θ E House
Cook, Albert Fremont	*Bangor*	645 Union St.
University of Maine		
Davis, John Bradford	*Haverhill, Mass.*	79 Kenduskeag Av.
Dow, Charles Whitefield	*Caribou*	76 Sanford St.
Bates College		
Gardner, Philips Brooks	*Machias*	183 Cedar St.
Greene, Arthur Albert	*Highgate Center, Vt.*	88 Palm St.
University of Vermont		
Harvey, Leigh Irving	*Bangor*	64 Center St.
Ingalls, Ralph Morrill	*Bridgton*	64 Center St.
Keith, Ballard Freese, B. A.	*Old Town*	Old Town
University of Maine, 1908. B. A., Oxford University, 1911		
Rand, Howard Benjamin	*Haverhill, Mass.*	147 Essex St.
Sawyer, Henry Waide	*Milbridge*	76 Sanford St.
Sullivan, Thomas Edward	*Lubec*	112 Sanford St.
Thompson, Harry Alonzo	*Jackson, N. H.*	320 Hammond St.
Weeks, Harold Edward, B. A.	*Fairfield*	396 Hammond St.
Bowdoin College, 1910		

JUNIORS

Adams, Charles Bayley	*Randolph, Vt.*	88 Palm St.
Aiken, Percy Lewis	*Sorrento*	88 Palm St.
Allen, Vivian Roath	*Norwich, Conn.*	28 Sanford St.
Barwise, Mark Alton	*Bangor*	101 Third St.
Beck, Andrew Jackson	*Deer Isle*	88 Palm St.
Bove, Bernard Anthony, B. A.	*Portland*	57 Pine St.
Van Buren College, 1906		

Boyle, James Louis, B. A. St. Joseph's College, 1906	*Calais*	112 Sanford St.
Chien, Yih C. Bates College	*Changchow, China*	112 Sanford St.
Corliss, Edgar Francis, Jr.	*Cumberland*	205 Main St.
Cowan, Walter Albion Bates College	*Winterport*	166 Union St.
Doten, Max V.	*Calais*	76 Sanford St.
Dwyer, William Henry University of Maine	*Biddeford*	88 Palm St.
Kennedy, Michael James	*Woodland*	112 Sanford St.
Roberts, Christopher Shirley	*Vinalhaven*	88 Palm St.
Stanley, John William	*Enfield, N. H.*	147 Essex St.
Studley, Ernest Allen Dartmouth College	*Rockland, Mass.*	112 Sanford St.
Turner, Erldon Blaisdell	*Augusta*	166 Essex St.

FIRST YEAR

Bartlett, Charles Drummond Harvard University	*Bangor*	58 Cedar St.
Blackington, Carl Adams University of Maine	*Rockland*	396 Hammond St.
Brown, Lester Edward	*Cape Elizabeth*	396 Hammond St.
Burgh, David Tosh, B. A. Bowdoin College, 1911	*Westbrook*	166 Union St.
* Chase, Walter Roland University of Maine		
Cohen, Samuel	*Bangor*	305 Essex St.
Drew, William Harriman	*Portland*	Hamlin Hall
Driscoll, Frank Gerald	*Penacook, N. H.*	64 Third St.
Goodspeed, Ernest Leroy, B. A. Bowdoin College, 1909	*Randolph*	64 Third St.
Gulliver, James Lucius	*Auburn*	
Hoar, Ellen Morancy Mary	*Barre, Vt.*	56 Madison St.
Hooker, Albert Austin	*Amherst, Mass.*	161 Hammond St.
Hooker, Earl Dewey	*Amherst, Mass.*	161 Hammond St.
Jewett, Donald Campbell University of Maine ——.	*Cherryfield* Amherst College.	Σ X House
Leonard, Charles Edward	*Haverhill, Mass.*	64 Third St.
Libby, Frank Milton	*Portland*	Δ T Δ House
Mountaine, James Barry	*Bangor*	Adams St.

* Deceased.

Niles, Gladys Madeline Mt. Holyoke College	*Bangor*	56 Madison St.
O'Hear, Hugh Joseph	*Thompsinville, Conn.*	112 Sanford St.
O'Leary, Cornelius Joseph	*Bangor*	96 First St.
Patterson, Arthur Willis University of Maine	*Castine*	Σ A E House
Pease, Harvey Roscoe	*Cornish*	40 Court St.
Sawyer, Allen Frank University of Maine	*Milbridge*	B Θ Π House
Small, Fred Wakefield	*Steep Falls*	40 Court St.
Stuart, William Earle	*So. Paris*	396 Hammond St.
Wadsworth, John Thaddeus, B. A. Bates College, 1909	*Gardiner*	64 Third St.
Weick, Carl Alfred	*Springfield*	86 Grant St.
Whitney, Clarence Alden University of Maine	*Portland*	Σ X House

SPECIAL STUDENTS

Brown, Royden Valentine Colby College	*Clinton*	396 Hammond St.
Cameron, Oliver Hugh	*Norton Mills, Vt.*	88 Palm St.
Dodd, Frederick Beaton	*Bangor*	5 Broadway
Epstein, Myer Wilfred	*Bangor*	303 Essex St.
Ferry, John Timothy	*Bangor*	36 Walter St.
Fox, Calvin Louis	*Houlton*	303 Hammond St.
Gillin, James McKinnon Bowdoin College	*Bangor*	119 Pine St.
Hamlin, Dunton, B. S. University of Maine, 1911	*Orono*	Orono
Horowich, Moe	*Bangor*	169 State St.
Hurley, Martin Francis University of Maine	*Bangor*	45 Sidney St.
Keegan, George J. St. Mary's College	*Van Buren*	128 Hammond St.
Levi, Simon	*Portland*	28 Second St.
Moran, James J.	*Chicopee Falls, Mass.*	277 Hammond St.
O'Connor, James Gorman	*Taunton, Mass.*	396 Hammond St.
Powers, Frank	*Lewiston*	88 Palm St.
Towle, James Roby	*Montpelier, Vt.*	396 Hammond St.
Turcott, Lyman	*Peekskill, N. Y.*	77 Union St.
Westgate, Harry Bloch	*Taunton, Mass.*	28 Second St.

SHORT PHARMACY

SECOND YEAR

Hinkley, Victor Hugo	*West Jonesport*	Park St.
Johnson, Fred Clook	*Princeton, Me.*	408 H. H. Hall
Nugent, Lloy Dodge	*No. Lubec*	10 Pine St.
Osboune, William, Jr.	*Bangor*	Bangor
Stewart, Fred Thomas	*Linneus*	Δ K House

FIRST YEAR

Barakat, Zaheeyeh Naoum	*Beyrout, Syria*	Bangor
Brewster, Hugh Maynard	*Dexter*	311 H. H. Hall
Chandler, Sidney Hobart	*Caribou*	409 H. H. Hall
Daviau, Omer	*Waterville*	Δ K House
Fletcher, Maurice Arthur	*Wilton*	Campus
Callagher, Wilfred Michael	*Caribou*	103 H. H. Hall
Lovely, Robert Osgood	*New Limerick*	Δ K House
Lynch, Thomas Augustus	*Bangor*	Bangor
Redman, Edward Sanderson	*Corinna*	Φ H K House
Rogers, Walter Henry	*Cathance*	College St.
Searles, Harold Henry	*Bangor*	Bangor
Turmelle, Wilfred Joseph	*Rochester, N. H.*	301 Oak Hall

TWO YEARS' COURSE IN DOMESTIC SCIENCE

SECOND YEAR

Sawyer, Mabelle	*Bangor*	Bangor
Stearns, Luzetta Allen	*Millinocket*	Mt. Vernon House

FIRST YEAR

Barkley, Emma Elizabeth	*Carlyle, Ill.*	Mt. Vernon House
Greene, Martha Belle	*So. Portland*	No. Main St.
Jackman, Ruth Durgin	*Vanceboro*	Mt. Vernon House

TEACHERS' COURSE IN AGRICULTURE

Wentworth, George Francis	*Woodman, N. H.*	

SCHOOL OF AGRICULTURE

SECOND YEAR

Austin, N. Kenneth	*Danville*	Campus
Bartlett, Everett Webber	*Monroe, R. F. D. No. 3*	Main St.
Clancy, Francis Everest	*Orono*	4 Myrtle St.

Covell, Henry Tewksbury	*Farmington*	Bradley
Everleth, Roger	*Auburn*	Σ Α Ε House
Goodwin, Howard Freeman	*Marlboro, Mass.*	Campus
Hamilton, Willis Crosby	*West Scarboro*	Park St.
Jones, Roy Edwin	*Pelham, N. H.*	Park St.
Jones, Walter Scott	*Somerville, Mass.*	305 H. H. Hall
Kimball, Everett Augustus	*So. Lawrence, Mass.*	Σ Α Ε House
Larrabee, Charles Carlyle	*Old Town*	Old Town
Nason, William Henry	*Calais*	1 Park St.
Osgood, Carrol Merton	*East Brownfield*	Θ Χ House
Pearson, Peter Andrew	*Calais*	Bangor
Rowe, Wilfred Sherman	*Auburn*	Θ Χ House
Smith, Perley Foster	*East Brownfield*	Campus
Smith, Ralph Lord	*Kennebunkport*	Σ Α Ε House
Taylor, Cleba Charles	*Skowhegan*	1 Park St.
Wadsworth, John William	*Cornish*	Campus
Waterman, Wilfred Allen	*Auburn*	Campus

FIRST YEAR

Barford, John Wallace	*E. Chatham*	403 H. H. Hall
Bates, Lucius Ray	*Westboro, Mass.*	Park St.
Berce, Woodbury Lee	*Caribou*	101 H. H. Hall
Bigelow, Ralph Burrill	*Orono*	Campus
Boothby, Harold	*Maplewood*	Pine St.
Buker, Irving Estes	*Bath*	Δ Κ House
Carle, Leon Percy	*No. Raymond*	H. H. Hall
Dodds, Ira Herman	*No. Hero, Vt.*	Park St.
Dodge, Leon Augustine	*So. Newcastle*	403 H. H. Hall
Ellis, Carroll Hatch	*Waterville*	No. Main St.
Farrar, Carl DeWees	*Lynn, Mass.*	111 H. H. Hall
Fuller, Nelson Edward	*Livermore Falls R. No. 1*	303 H. H. Hall
Gray, George Edwin	*Anson*	203 H. H. Hall
Hawkes, Harry Sawyer	*Cumberland*	Δ Κ House
Jones, Martin Ernest	*Nashua, N. H., R. 3*	16 Main St.
Leary, James Augustus	*E. Hampden*	Campus
Leusher, Herbert Lockwood	*Cambridge, Mass.*	103 Oak Hall
McCloy, Robert Bruerton	*Buffalo, N. Y.*	Φ Γ Δ House
McIntire, Charles	*Perham*	101 H. H. Hall
Merrill, Lawrence Otho	*Mechanic Falls*	109 H. H. Hall

Merry, Eugene Raymond	*Madison*	211 Oak Hall
Merry, Roy Lee	*Madison*	211 Oak Hall
Morse, Leppien William	*Upton*	104 H. H. Hall
Richardson, Arthur Waterhouse	*Old Orchard*	Myrtle St.
St. Clair, Melvin Henry	*Owl's Head*	201 H. H. Hall
Sawyer, Elmer Frederick	*Saco*	Myrtle St.
Sidelinger, Alfred Henry	*Nobleboro*	Campus
Snow, Albert Henry	*Bucksport*	104 H. H. Hall
Snow, Everett Aaron	*Lawrence, Mass.*	Σ A E House
Tarbox, Earle Wentworth	*Saco*	Park St.
Tebbetts, Fred Milton	*Belgrade*	209 H. H. Hall
Wadsworth, Carroll Benton	*Cornish*	Park St.
West, Thomas Ross	*Saco, R. F. D.*	Park St.
Woodman, Philip Furness	*Biddeford*	201 H. H. Hall

SUMMER TERM

(Abbreviations indicate subjects taken)

Alley, Clifton Lowery	*Mt. Vernon*	Ms. Ps.
Ames, Leroy Winfield, B. A. Principal	*Bangor*	Ch. Ps.
Arey, Florian George, Teacher	*Stonington*	Ms. Ps.
Baker, Helen Marie	*Orono*	Ms. Rm.
Ballou, William Rice	*Bath*	Ec. Eh. Hy. Ms.
Barker, Corinne Maude Teacher	*Bangor*	Ed. Eh. Ms.
Black, Frank Harcourt	*Pawtucket, R. I.*	Ms.
Blanchard, Franklin Roy	*Beverly, Mass.*	Ms. Ps.
Blodget, Hugh Young	*Bucksport*	Ms.
Boardman, Elliot Sheffield	*Guilford*	Lt. Ms.
Bradbury, Ira Miller	*Gorham*	Ms. Ps.
Brean, Lloyd Francis	*Lee*	Eh. Ms.
Bright, Elizabeth Mason	*Bangor*	Ps.
Brooks, James Stothard	*Brewer*	Eh. Gm. Ms.
Burch, Joseph Francis	*No. Brewer*	Ec. Ed. Hy. Ps.
Buzzell, Robert Loring	*Old Town*	Ec. Eh.
Chapman, George Bunker	*Augusta*	Ec. Ed.
Chase, Charles Arthur	*Sebec Station*	Ch. Ec. Gm.
Chilcott, Clio Melissa, A. B. A. M. Teacher	*Bangor*	Ch. Ds.
Collins, Charles Frederick	*Dorchester, Mass.*	Ec. Ed. Hy.

Cronin, John Patrick	*Worcester, Mass.*	Ec. Eh. Md.
Crosby, Harry Lawrence	*Portland*	Ec. Ms.
Cerrier, Blanche, B. A. Teacher	*Haverhill, Mass.*	Gm. Rm.
Daggett, Windsor Pratt, Ph. B. Professor	*Orono*	Gm. Rm.
Davis, Clarion Almado	*Collinsville, Conn.*	Ed. Hy. Lt.
Davis, Ellen Margaret	*Old Town*	Ms. Ps.
Dinsmore, Ernest Leroy, B. A. Teacher	*Auburn*	Ch. Ps.
Dixon, Esther Margaret Teacher	*Southwest Harbor*	Ec. Eh. Lt. Hy.
Dow, Owen Oscar, B. S.	*Hiram*	Ch. Ps.
Dyer, Guy Valentine	*Calais*	Ec. Eh. Gm.
Evans, James Alfred	*Bangor*	Eh. Ms.
Faulkner, William Thomas	*Greene*	Ec. Ms. Ps.
Ferguson, George	*Springvale*	Ms. Ps.
Fernandez, Gracia Lillian, B. S. Teacher	*No. Dexter*	Gm. Lt.
Fletcher, Roland Ezra	*Madison*	Hy. Lt.
Ford, Perley Harvey Principal	*Sanford*	Ch. Ps.
Frohock, Joseph Atkinson	*Waldoboro*	Ch. Ec. Hy.
Garland, Philip	*Old Town*	Ec. Gm.
George, Daisy Evelyn	*Orono*	Eh. Gm. Rm.
Gerrish, Leo Melville	*Berlin, N. H.*	Ec. Md.
Gilbert, William Henry, A. B. Principal	*Milo*	Ch. Ps.
Gilmore, Edith Teacher	*Brewer*	Eh. Rm.
Gordon, Robert James	*Bangor*	Md. Ps.
Gray, Ernest Linwood	*Cornish*	Ch. Hy.
Hamlin, Joseph W. Principal	*No. Anson*	Ed.
Harthorn, Marion Louise	*Milford*	Lt. Rm.
Hartill, Leonard Ramsden	*Brunswick, R. No. 4*	Ec. Rm.
Hebard, William Everett	*Southbridge, Mass.*	Ed. Ms. Ps.
Henderson, Robert Raymond	*Madison*	Ec. Ps. Rm.
Higgins, Ernest Daniel Teacher	*Morrill*	Ch. Ed. Rm.
Hilton, William	*Greenville*	Eh. Ps.

Hodgkins, Edward Marshall	*No. Pembroke, Mass.*	Ms.
Houghton, Lloyd Everett	*Lee*	Ch. Ec.
Huggins, Leslie Mansfield	*Malden, Mass.*	Hy. Ps.
Hurley, Wilfred Geoffrey	*Frankfort*	Lt. Rm.
Jones, Carrol Clair	*Solon*	Ec. Eh. Ms.
Jones, Charles Nelson	*Mercer*	Ag. Ms.
Jones, Frederic Sawtelle	*Augusta*	Eh. Ms.
Jones, Harold Libby	*Corinna*	Lt. Ms. Ps.
Jones, Heywood Shaw	*Bangor*	Gm. Lt. Rm.
Jordan, Grace	*Waltham*	Ds. Eh. Hy.
King, Albert Lincoln	*So. Paris*	Ch. Hy. Ms.
Lane, Arthur	*Dorchester, Mass.*	Hy. Ms. Rm.
Libby, Julia May Teacher	*Hartland*	Eh. Ms.
Mansfield, Warren Wilson, Jr.	*Portland*	Eh. Gm. Rm.
Mariner, Hazel Folsom	*Milford*	Ec. Eh.
Mellor, Lewis Leroy	*Guilford*	Eh. Gm.
Michaels, Janie Chase, M. S.	*Stillwater*	Ds.
Murray, Walter Edward	*E. Lynn, Mass.*	Ec. Ps.
Nealey, James Barton	*Bangor*	Ms.
Nutter, William Josiah, A. B. Principal	*Brooklin*	Ag.
Oak, Malcolm Hayford	*Caribou*	Eh. Lt.
Parker, William Emery	*Harrington*	Ec. Md.
Parsons, Grace Ina, A. B. Preceptress	*Bangor*	Ds. Hy.
Perry, Frances Marion Teacher	*Orono*	Ed. Eh. Hy.
Pinkham, Seymour Leroy	*Portland*	Md. Ms. Ps.
Pope, Morrill Stuart	*E. Machias*	Eh. Ms.
Pratt, Mary Ella Teacher	*Malden, Mass.*	Rm.
Pretto, Frances Ella Teacher	*Orono*	Ed. Hy. Rm.
Quarmby, George Henry	*Saugus, Mass.*	Ch. Md.
Rand, Ernest Abbott	*Portland*	Ch. Eh. Gm.
Rand, Lynne Thomas	*Unity*	Ec. Hy. Rm.
Richardson, Howard Byron	*Southwest Harbor*	Ec. Gm. Rm.
Roberts, George Harley	*Brownville Junct.*	Ch. Hy. Rm.
Robinson, Eben George	*Edgewood, R. I.*	Ch. Ms. Rm.

Rogers, Florence Abbie, A. B. Teacher	*Bangor*	Ch. Ms. Rm.
Rogers, Martha	*Atlanta, Ga.*	Ds.
Sawyer, Grace Ruth	*Old Town*	Ms.
Sawyer, Ralph M.	*Milford*	Lt. Ms.
Shepherd, Thomas Dudley	*Wellesley Hills, Mass.*	Ec. Eh.
Simonds, Gertrude Estelle, B. L. Teacher	*Haverhill, Mass.*	Hy. Rm.
Small, Nathan Houston	*Belfast*	Ec. Ed. Rm.
Smith, Frederic Edward	*New Bedford, Mass.*	Ec.
Spear, Graham Brown	*Springfield, Mass.*	Md.
Spencer, Harold Clegg Teacher	*Boston, Mass.*	Ec. Eh. Hy.
Sturgis, David William	*Gorham*	Eh. Ms. Rm.
Sutton, Arra Louise Teacher	*Orono*	Ds.
Thompson, Frederick Mosher	*Portland*	Ps. Rm.
Thompson, Harry Ernest	*Bath*	Ec. Md.
Tibbetts, William Herbert	*Bangor*	Ch. Ms. Rm.
Tolman, Lewis Brewster	*Bangor*	Ms.
Torres, Arturo	*San Jose, Costa Rica*	Ch. Ms.
Trask, Clara M., A. B. Teacher	*Peabody, Mass.*	Rm.
Turner, Viola J. Teacher	*Palermo*	Ds.
Urann, Eugene Harrison Teacher	*E. Sullivan*	Eh. Rm.
Vickery, Harry Whitman	*E. Auburn*	Ec.
Varnum, John Prescott	*Bangor*	Hy. Ps.
Walcott, Chester Lincoln	*Providence, R. I.*	Hy. Ms.
Walker, Fred Dudley	*Belchertown, Mass.*	Eh. Ms. Rm.
Walker, Maurice Elliot	*Newport*	Lt.
Walsh, Margaret Euphrasia	*Brewer*	Ds. Eh. Rm.
Walters, Philip Harris Teacher	*Readfield, R. No. 27*	Eh. Ms.
Webber, Elmer Harrison Principal	*Mt. Vernon*	Lt. Rm.
Webster, Sara Oliver	*Buxton*	Ed. Eh. Rm.
Wescott, Chester Arthur	*Bar Harbor*	Ch. Ec. Hy. Rm.
Wescott, Guy Raymond	*Rumford*	Eh. Ps.
Wheelwright, Henry Jefferds	*Bangor*	Ag. Ec.
White, Marjorie Adelle	*Danforth*	Eh. Hy.

Whittemore, James Arthur	*Bangor*	Ms.
Witham, Walter Remick	*Madison*	Ec. Gm. Hy.
Woodberry, George Roundy	*Beverly, Mass.*	Eh. Hy.
Woodman, Fred	*Bangor*	Lt. Ms. Rm.
Wu, Maen Chang	*Canton, China*	Ch. Ms.
York, George James	*Yarmouthville*	Eh. Ms.
Young, Muriel Teacher	*Brewer*	Eh. Rm.
Young, Mary Kathleen Teacher	*Brewer*	Eh. Lt. Rm.

SHORT COURSES

DAIRYING AND GENERAL AGRICULTURE

Boston, Lawrence B.	Fort Kent	Jackson, Edward B., Jr.	South Waterford
Cottle, J. Murrie	Houlton	Jones, Jessie A.	Lambert Lake
Frenck, DeLeon A.	Norway	Lievens, Jules G.	Cedar Grove
Hamlin, Carl S.	Harrison	Millay, Horace J.	Richmond
Higgins, Bradley C.	Levant	Moore, Vincent G.	Glenburn
Hilton, Walter A.	North Cornville	Pike, Harold S.	Waterford
Hunt, Frank A.	Norway	Pillsbury, J. Frost, Jr.	Limington
Hutchins, Thurston H.	North Anson	Sedgeley, George B.	Phillips

HORTICULTURE

Bowers, John W.	Portland	Hutchins, Thurston H.	North Anson
Bradford, Fred J.	Manchester, N. H.	Lievens, Jules G.	Cedar Grove
Conant, H. L.	Hebron	Littlefield, H. W.	Brooks
Conant, R. L.	Hebron	Merrill, H. T.	South Poland
Conant, R. M.	Hebron	Moulton, S. P.	Limington
Cotter, James P.	Salem, Mass.	Palmer, George L.	Kents Hill
Currier, Henry M.	Perham, N. H.	Pillsbury, J. Frost, Jr.	Limington
Gee, Albert H.	Lewiston	Schwartz, W. B.	Winthrop Center
Hardy, W. M.	Brewer	Washburn, C. C.	Mechanic Falls
Heald, U. H.	Paris	Wheeler, C. E.	Chesterville

POULTRY HUSBANDRY

Abbott, Fred A.	Belfast	Atwood, Walter H.	Searsport
Aiken, Mary B.	Milo	Bacon, Roy S.	Oakland
Aldrich, Earl	Bangor	Bartlett, George A.	North Blanchard
Atherton, W. A.	Brewer		

Bartlett, Silas	Lewiston	Homestead, Edward H.	Orono
Blake, E. W.	Bangor	Homestead, Ralph G.	Orono
Bonney, Harriet G.	Bath	Hutchins, Thurston H.	North Anson
Boynton, Ernest W.	Harrington	Jewett, Arthur R.	Skowhegan
Burton, Leonard	Skowhegan	Jones, Jessie A.	Lambert Lake
Chandler, James A.	Bangor	Kendall, W. A.	Bangor
Chilman, Arthur E.	Bar Harbor	Leary, James A.	East Hampden
Cole, Althea M.	Bradford	Lievens, Jules G.	Cedar Grove
Cole, Evie M.	Bradford	Little, A. L.	South Brewer
Cotter, James P.	Salem, Mass.	Little, Wallace C.	South Brewer
Cousins, Edgar M.	Old Town	McKenny, Julia L.	Stillwater
Currier, Henry M.	Perham, N. H.	Malvey, Patrick J.	Bangor
Dillingham, Charles A.	Hampden	Murch, H. J.	Bangor
Dodge, A. W.	Troy	Nealley, Edward R.	Brewer
Eaton, L. C.	Searsport	Nealley, Fred A.	Winterport
Frazier, George	Eastport	Oakes, Albion	Milford
Gardiner, John Hays	Gardiner	Penley, G. H.	Lewiston
Gee, Albert H.	Lewiston	Piper, Harold L.	Troy
Getchell, W.	Stillwater	Staples, Arthur R.	Bangor
Greeley, H. P.	Bangor	Thomas, William	Milford
Gregory, Alfred	Gorham, N. H.	Toner, Ernest L.	Orono
Hale, William F.	Auburn	Treworgy, Elmer J.	Bangor
Hodaly, John	Myitramogye, Hungary	Tupper, F. H.	Bangor
Hodges, D. S.	Bangor	Weeks, Thomas S.	Winterport

PASTORS

Ayer, William O.	Kenduskeag	Pethybridge, Charles E.	Marion, Mass.
Clifford, Howard A.	Winthrop	Purdy, Charles A.	Orrington Center
Collins, Charles F.	Dorchester, Mass.	Sauer, George C.	Bangor
Cousins, Edgar M.	Old Town	Scott, Alva R.	Bangor
Lyman, Joseph B.	Orono	Smith, Chellis V.	Bradley
Morris, Arthur E.	Old Town	Smith, Oscar S.	Orono
Morse, Warren	Brewer	Young, Sidney O.	Brewer
Nutter, William J.	Haven		

FARMERS' WEEK

Abbott, F. A.	Belfast	Arnold, Mabel	Orono
Aiken, M. B.	Milo	Atkinson, Mrs. I. B.	Levant
Aley, Mrs. R. J.	Orono	Atkinson, I. B.	Levant
Arkell, T. R.	Durham, N. H.	Austin, P. M.	Danville

Averill, Mrs. W. S. Orono
Ayer, W. O. Kenduskeag
Bachelder, P. J. Bangor
Bailey, L. A. Medford
Baker, A. M. Hampden Highlands
Banks, C. F. Bangor
Banks, L. G. Bangor
Barber, C. W. Augusta
Bartlett, E. N. Winterport
Bartlett, Mrs. E. N. Winterport
Bartlett, J. M. Orono
Bateman, L. C. Lewiston
Beach, Mrs. D. N. Bangor
Bean, Mrs. P. L. Orono
Bell, Harry Garland
Bell, Mrs. H. G. Evanston, Ill.
Bell, H. M. Islesboro
Benner, D. M. Monmouth
Bickmore, E. D. Stockton Springs
Bishop, E. A. Arnold's Mills
Black, H. C. Augusta
Black, Mrs. H. C. Augusta
Boring, A. M. Orono
Boultbee, L. H. Bangor
Bradford, P. W. Corvallis, Ore.
Brett, B. C. Auburn
Brown, Mrs. C. B. Orono
Browne, Gertrude Orono
Brown, J. C. Orono
Brown, Mrs. W. A. Ottawa, Can.
Buckley, J. P. Stroudwater
Burgess, Mrs. J. H. Bangor
Burke, A. K. Orono
Call, Irving Carmel
Came, C. F. Bar Harbor
Campbell, Josephine Orono
Campbell, Mrs. W. J. Old Town
Cannon, Mrs. W. Orono
Cannon, J. T. Bangor
Chambers, Mrs. S. D. Orono
Chandler, Mrs. A. J. Bangor
Chandler, R. C. D. Bangor
Chapman, E. R. South Brewer
Chapman, Mrs. E. R. South Brewer
Chase, Elizabeth Orono
Chase, Mrs. G. D. Orono
Chase, H. E. North Edgecomb
Cheswell, Mrs. E. C. Orono
Chilcott, Mrs. L. S. Bangor
Chrysler, Mrs. M. A. Orono
Church, V. Bangor
Clark, Mrs. C. M. Bangor
Clark, Doris Bangor
Clark, Grace Orono
Cleaves, Vaughan Steuben
Clement, J. J. Ctr. Montville
Clement, Mrs. J. J. Ctr. Montville
Clement, Mrs. P. A. Ctr. Montville
Clifford, A. J. Sandy Point
Coady, Eliza Orono
Conser, Mrs. H. N. Orono
Copeland, Roscoe Dexter
Copeland, R. L. Holden
Copeland, Mrs. R. L. Holden
Craig, J. M. Orono
Craig, Mrs. W. Orono
Crane, Mrs. L. F. Orono
Cressy, S. W. Corinth
Cunningham, J. A. Orono
Curtis, Mrs. W. M. Orono
Cushman, E. L. Bangor
Davee, Mrs. E. W. Orono
Davis, Hugh Veazie
Davis, Mable Hudson
Davis, M. S. Bangor
Davis, P. H. Veazie
Davis, W. H. Augusta
Day, A. P. West Kennebunk
DeRoche, Hattie Howland
Dillingham, C. A. Hampden
Dillingham, V. Bangor
Dresser, C. Turner
Dresser, L. Bangor
Drew, Mrs. G. A. Orono

Dudley, E. L.	Bangor
Dudley, Mrs. E. L.	Bangor
Dunn, Mrs. C. J.	Orono
Dunn, Mrs. H. J.	Bangor
Dunning, H. A.	Bangor
Easley, Mrs. C. W.	Orono
Edes, Mrs. R. H.	Bangor
Edgecomb, H. G.	Orono
Elden, Carl	Bradford Ctr.
Emerson, B.	Bangor
Emerson, Mrs. C. T.	Bangor
Estabrooke, E. R.	Orono
Estabrooke, Mrs. K. C.	Orono
Evans, S. G.	Waldo
Farrar, F. S.	East Corinth
Farrington, A.	Brewer
Farrington, C. O.	Brewer
Fenderson, G.	Stetson
Finn, Mrs. H. H.	Orono
Fisher, Mrs. C. C.	Hudson
Fletcher, I.	Orono
Flood, H. A.	Rutland, Vt.
Fogg, G. P.	Hulls Cove
Folsom, Edith	Stillwater
Folsom, Mrs. E. O.	Stillwater
Folsom, Lena	Bangor
Fortier, E.	Orono
Foss, E. C.	Foxcroft
Fournier, N.	Orono
Gardner, George	Bangor
Garland, C. L.	Bangor
Garland, Mrs. C. L.	Bangor
Garland, Mrs. C. A.	Bangor
Garland, Mrs. A. G.	Old Town
Geaghan, Mrs. J.	Brewer
Gee, A. M.	Orono
George, C. W.	East Orrington
George, Mrs. C. W.	East Orrington
Gibbs, B. W.	Bridgton
Gibbs, Mrs. B. W.	Bridgton
Gifford, E. E.	Canaan
Gilbert, Alice	Orono
Gilbert, D.	Orono
Gonyer, A.	Orono
Goodridge, N. E.	Orono
Goodridge, Mrs. N. E.	Orono
Goodridge, O. T.	Orono
Grant, F.	Sandy Point
Graves, B. C.	Northeast Harbor
Graves, M.	Orono
Gray, F. E.	New Gloucester
Gray, F. H.	Mt. Desert
Gray, Mrs. R. P.	Orono
Gray, W.	Mt. Desert
Griffin, H. W.	Bangor
Grinnell, G. G.	Exeter
Grover, C. B.	Brewer
Grover, J. P.	Brewer
Grover, Mrs. J. P.	Brewer
Griffin, F. T.	Bangor
Griffin, Mrs. F. T.	Bangor
Griffin, H. M.	Sandy Point
Guptill, A. J.	Berwick
Haggett, Mrs. W. W.	Orono
Haley, S.	Orono
Hamilton, Mrs. Chas.	Orono
Hammond, Mrs. R. L.	Orono
Hamor, Ralph	Northeast Harbor
Hamor, Roy	Northeast Harbor
Hanson, H. H.	Orono
Harris, D. G.	Stillwater
Hart, Mrs. J. N.	Orono
Hart, Mrs. W. L.	Holden
Harwood, S. E.	Bennington, Vt.
Haskell, N. D.	Mechanic Falls
Hatch, J. W.	Bangor
Hatch, Mrs. J. W.	Bangor
Hayes, F. S.	Oxford
Heald, A. A.	Waterville
Hersey, Margaret	Veazie
Hescock, J. C.	Guilford
Hilton, Ernest	Anson
Hodgkins, W.	Bucksport
Holt, Ashley	Orono

Hooper, H. B.	Brooklin
Howard, F.	Bangor
Hunt, F. H.	Unity
Hunt, G. H.	Bangor
Hunt, Mrs. G. H.	Bangor
Hunt, W. J.	Holden
Hussey, E. H.	Guilford
Hutchings, W.	Orland
Jackman, Mrs. W. F.	Orono
Jewett, Mrs. A. C.	Orono
Jewett, L.	Bangor
Johnson, A. G.	North Bangor
Johnson, Charles	Machias
Jones, Albert	Orono
Jones, E. M.	Unity
Jones, G. M.	Etna
Jones, K.	Bangor
Jones, M. S.	Bangor
Jose, S. O.	Dexter
Kaulfuss, Mrs. J. E.	Orono
Kelleher, Mrs. B. P.	Orono
Kent, A. M.	Old Town
Kent, Mrs. B. H.	Old Town
Kent, C. B.	Bangor
Kent, Emily	Old Town
King, A. W.	Orrington
King, H.	Orono
Knowlton, G. H.	Vassalboro
Ladner, M. R.	Orono
Leach, A. F.	Bucksport
Leavitt, C. A.	Turner
Leland, J. W.	Dover
Leland, Mrs. J. W.	Dover
Lewis, C. E.	Orono
Lewis, Mrs. C. E.	Orono
Lewis, J. P.	Bucksport
Lincoln, H. M.	Corinna
Little, A. L.	Brewer
Littlefield, J. E.	Brewer
Lord, Mrs. A. L.	Orono
Loring, Charles	Carmel
Lowe, E. S.	Gray
Lowe, I. E.	Fairfield
Lowell, Gladys	Bangor
Luce, H. J.	South Newburg
Lyman, Mrs. J. B.	Orono
McLeod, K. G.	Bangor
McLeod, F.	Bangor
McIntire, C. S.	East Waterford
McIntire, Mrs. C. S.	East Waterford
McKnight, S.	Orono
McPheters, A. S.	Orono
Mahony, Mrs. W. A.	East Northport
Malony, Mrs. J. A.	Orono
Mansfield, Mrs. B. B.	Jonesport
Mansfield, Mrs. E. W.	Orono
Mason, Mrs. E. J.	Biddeford
Mayo, K. C.	Bradley
Merrick, H. J.	Augusta
Merrill, Dwight	Gray
Merrill, E. S.	Orono
Merrill, F. H.	Orono
Merrill, G. H.	Orono
Merrill, H. S.	Orono
Merrill, K.	Orono
Merrill, Mrs. L. H.	Orono
Merrill, Mrs. L. S.	Orono
Merryman, R. S.	Orono
Millett, Mrs. H.	Orono
Milliken, E. R.	West Baldwin
Mitchell, Rives	Bangor
Mitchell, R. P.	Kent's Hill
Monroe, J. R.	Monroe
Moore, J. A.	Glenburn
Moore, Mabel	Bangor
Moore, W. C.	Bangor
Morris, Frank	Orono
Morse, C.	Orono
Morse, G. H.	Dover
Morse, Mrs. W.	Brewer
Mosher, C. H.	Wilton
Mosher, H. H.	Wilton

Mosher, Mrs. W.	Orono
Moulton, Mrs. M.	Bangor
Moulton, B. H.	Orono
Nealy, Joseph	Machias
Needham, Mrs. M.	Old Town
Ness, J. A.	Auburn
Noble, P. F.	Pittsfield
Noble, V. M.	Pittsfield
Noyes, C. E.	Limestone
Packard, A. B.	Kenduskeag
Page, E. E.	East Corinth
Page, W. A.	Kenduskeag
Parcher, Mrs. M. J.	Orono
Park, Mrs. F. C.	Orono
Park, M. M.	Orono
Peabody, W. J.	Exeter
Perkins, C.	Orono
Perkins, Mrs. C. F.	Bangor
Peters, L.	Bangor
Peters, O.	Bangor
Plummer, Wm.	Monroe
Potter, F. A.	Old Town
Porter, G. C.	Houlton
Prentiss, Mrs. Chas.	Brewer
Prescott, S. E.	East Corinth
Pretto, F.	Orono
Prime, G. H.	Eliot
Prince, Mrs. W. E.	Orono
Pullen, W. E.	Exeter
Rackleff, Mrs. J. C.	Orono
Reardon, Wm.	South Paris
Redman, Mrs. R. W.	Orono
Reed, C. D.	Orono
Reed, Mrs. D. S.	Orono
Reed, E. A.	Orono
Reed, Jason	Hollis, N. H.
Reed, Mrs. Jason	Hollis, N. H.
Reed, Geneva	Orono
Reed, Mrs. L. J.	Orono
Rich, J. F.	Rockland
Richardson, Mrs. W.	Old Town
Richardson, W. D.	Bangor
Ricker, F. P.	Turner
Rines, J. H.	Portland
Rines, Mrs. J. H.	Portland
Ring, Mrs. E. E.	Orono
Ring, Helen	Orono
Robbins, Mrs. L.	Veazie
Rooney, Daniel	Brewer
Rooney, Mrs. D.	Brewer
Rowe, Mrs. H. W.	Brewer
Russell, S. L.	Orono
Sawtelle, A. M.	Orono
Sawyer, Mrs. A. C.	Bangor
Schult, Roy	Charleston
Searles, A. W.	Brownville
Searles, Joseph	Brownville
Seely, E. B.	Orono
Shand, C. L.	Bar Harbor
Shaw, E. E.	Orono
Shaw, Mrs. W. F.	Orono
Sherman, G. H.	Hampden
Sherman, Mrs. G. H.	Hampden
Simmons, Mrs. G. E.	Orono
Smith, A. B.	Brewer
Smith, D. B.	Bangor
Smith, Earl	Dixmont
Smith, E. R.	Hudson
Smith, Mrs. E. R.	Hudson
Smith, Mrs. G. W.	Bangor
Smith, L. H.	Orrington
Smith, P. M.	Brewer
Smith, Ralph	Hulls Cove
Springer, Zilla	Portland
Stanford, E. A.	West Kennebunk
Staples, John	Veazie
Stetson, C. S.	Greene
Stevens, C. A.	Orono
Stevens, Mrs. G.	Great Works
Stevens, Otis	Plymouth
Steward, G. D.	Skowhegan
St. Peter, Frank	Orono
Stratton, C. W.	Hancock
Strout, Mrs. H. A.	Brewer

Sullivan, Mrs. D. C.	Orono
Sullivan, N. D.	Kents Hill
Swett, M. E.	Orono
Swett, Alma	Brewer
Templin, Mrs. E. W.	Orono
Thompson, G.	Orono
Thurston, R. E.	Union
Tilton, F. S.	Charleston
Tripp, C. F., Jr.	Canton Point
Twitchell, B. F.	Waterville
Walker, A. G.	Canton
Walker, C. W., Jr.	Canton
Waterman, C. E.	Auburn
Watson, F. H.	Dexter
Webster, Effie	Orono
Weeks, Adelaide	Jefferson
Weeks, E. A.	Winterport
Weeks, T. S.	Winterport
Weld, C. C.	Old Town
Weston, A. G.	Old Town
Whidden, Mrs. G. E.	Bangor
Whitcomb, Mrs. F. E.	Orono
White, Irving	Brewer
Whitney, F. P.	Old Town
Wilson, A. J.	Orono
Wilson, H. O.	Bangor
Wilson, Mrs. S. J.	Bangor
Winchester, J. H.	Corinna
Wingard, Mrs. E. R.	Orono
Wing, Mrs. H. R.	Orono
Wood, R. J.	Orrington
Wood, C. A.	Orrington
Woods, Mrs. C. D.	Orono

GENERAL SUMMARY

FACULTY

President	1
Professors	38
Associate Professors	9
Assistant Professors	11
Instructors	32
Tutors	2
Lecturers	6
Assistants	2
Additional Instructors in the Summer Term	5
Total	106
Other Officers	25
College of Agriculture	18
College of Arts and Sciences	44
Agricultural Experiment Station	14
College of Law	10
College of Technology	22
Officers common to all Colleges	6
	114
Duplicated	8
	106

STUDENTS

Graduate Students	12
Seniors	101
Juniors	88
Sophomores	118
Freshmen	183

Special Students		35
College of Law Graduate Students	28	
Seniors	17	
Juniors	17	
First Year	28	
Specials	18	108
Short Pharmacy Second year	5	
First Year	12	17
Teachers' Course in Agriculture		1
Two Years' Course in Domestic Science		
Second Year	2	
First Year	3	5
School Course in Agriculture		
Second Year	20	
First Year	34	54
Summer Term		126
Winter Course in Agriculture		16
Winter Course in Horticulture		20
Winter Course in Poultry Husbandry		55
Pastors' Course		15
		954
Duplicated		58
Total		896

CLASSIFICATION BY RESIDENCE

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Aroostook	30
Cumberland	83
Franklin	11
Hancock	32
Kennebec	40
Knox	21
Lincoln	8
Oxford	40
Penobscot	235
Piscataquis	16
Sagadahoc	9
Somerset	30

Waldo	32	
Washington	41	
York	36	701
California	1	
Connecticut	10	
Georgia	1	
Illinois	2	
Massachusetts	120	
New Hampshire	25	
New Jersey	1	
New York	12	
Pennsylvania	4	
Rhode Island	5	
Vermont	8	189
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Costa Rica	1	
Hungary	1	
Syria	1	
Turkey	1	6
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